

LESSON PLAN 1.1: MATH

TOPIC	) Counting 1-5
OBJECTIVES	) Learners will be able to count up to 5) Learners will be able to write numbers up to 3
MATERIALS REQUIRED	) Number cards for 1 - 5) Counters (stones, leaves, and other small objects)) Paper and pencils for the pupils
WARM-UP  5 minutes	Say:) How does a herder keep track of his cattle?) How does a fruit seller keep track of her finances?) Can you think of other ways to use math in daily life?
LEARN  15 minutes	1) Explain that today we will count from 1 to 5 and write numbers 1 to 3. 2) Count items up to five in the nearby environment (trees, leaves, learners pencils, etc). Pupils can also find items to count. 3) Ask 5 pupils to come forward. As each comes forward, they should loudly say their number (1, 2, 3, 4 or 5). 4) Give the 5 volunteers a pile of stones. Say different numbers, and ask them to count the corresponding stones.
PRACTICE  10 minutes	1) Form groups of 3-5 pupils. Make sure there is one advanced pupil in each group who can be a group leader. 2) Give each group a set of counters. Say a number and ask the group to count the correct number of stones. The advanced learner should help the others count. Make sure all learners have a turn. 3) Continue saying different numbers for learners to count. Circulate to monitor groups and make sure all learners are counting.

WRITE  15 minutes	1) Show pupils how to write the number 1 in the air and on the board. 2) Ask pupils to write the number 1 in the air, then in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with the number 2 and the number 3. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 5) Under each number, write a slash mark 1 2 3 and ask pupils to help you count it. / // ///
ASSESS  10 minutes	1) Point to number 1, 2, and 3 on the board, and ask pupils to say the number. 2) Play “true or false.” Write a number on the board and say the name of the number. Sometimes say the correct name, sometimes say the incorrect name. Pupils will tell you if it is true or false. (For example, if you write “2” and say “two,” they should say true. If you write “2” and say “three,” they should say false). If it is false, then ask them to tell you the correct answer. 2) If time permits, ask a pupil to lead the game of true or false on the board.
SUMMARIZE  5 minutes	1) Ask pupils what they have learned today. 2) Ask pupils to practice writing numbers 1, 2 and 3 at home.

LESSON PLAN 1.2: MATH											
TOPIC	) Counting 1-5										
LEARNING OUTCOME	) Learners will be able to count up to 5) Learners will be able to write numbers 4 and 5										
MATERIALS REQUIRED	) Number cards for 1-5) Paper and pencils for the pupils										
WARM-UP  5 minutes	Say:) Yesterday we talked about practical ways to use math in daily life. Who remembers an example?) Can you think of any other ways to use math in daily life?										
LEARN  15 minutes	1) Say: Today we will count from 1 to 5 and write numbers 4 and 5. 2) Draw dots on the board for each number 1-5. Ask children to count the dots with you. After they count the dots, write the number next to each set of dots. <table border="1" data-bbox="1339 1010 1528 1224"> <tbody> <tr><td>•</td><td>1</td></tr> <tr><td>••</td><td>2</td></tr> <tr><td>•••</td><td>3</td></tr> <tr><td>••••</td><td>4</td></tr> <tr><td>•••••</td><td>5</td></tr> </tbody> </table> 3) Point to each number you have written and ask children to name it. 4) Show number cards 1 – 5 in order, then out of order. After you show a card, ask a pupil to match it to the board. 5) Ask pupils to count backwards with you from 5.	•	1	••	2	•••	3	••••	4	•••••	5
•	1										
••	2										
•••	3										
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•••••	5										
PRACTICE 	1) Form groups of 5 pupils and give each group a number card. Make sure there is one advanced pupil in each group who can be a group leader. 2) Give each group number card. They should count the number of stones on their number card.										

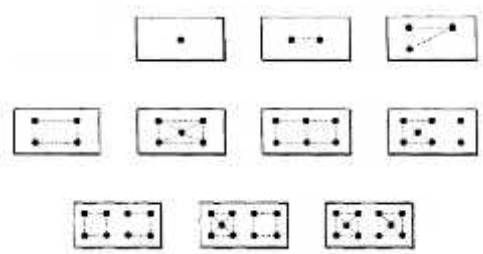
10 minutes	3) As groups to switch number cards and count again. Groups should switch cards several times.
WRITE  10 minutes	1) Show pupils how to write the number 4 in the air, then on the board. 2) Ask pupils to write the number 4 in the air, then in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with the number 5. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 5) Under each number, write a slash mark and ask pupils to help you count it. 4 5 //// /////
ASSESS  5 minutes	1) Point at random to the numbers written on the board. Ask pupils to name the number, then hold up the correct number of fingers to represent the number.
READ ALOUD  15 minutes	1) Read aloud “Bishiya Mai Kyautar Mangwaro,” and ask the comprehension questions. 2) Ask pupils what numbers they heard in the story. 3. Ask pupils what they learned today.

LESSON PLAN 2.1: MATH

TOPIC	) Counting 1-10
OBJECTIVES	) Learners will be able to count up to 10) Learners will be able to write numbers 6, 7 and 8
MATERIALS REQUIRED	) Number cards for 1 - 10) Counters (stones, leaves, and other small objects)) Paper and pencils for the pupils
WARM-UP  5 minutes	<u>Wakar Kirge</u> Daya mafarin kirge, Biyu idanun dabba, Uku duwatsun murhu, Hudu kafafun tebur, Biyar na yatsun hannu.
LEARN  15 minutes	1) Explain that today we will count from 1 to 10 and write numbers 6, 7 and 8. 2) Count items up to 10 in the nearby environment (trees, leaves, shoes, pencils, etc). Pupils can also find items to count. 3) Ask 10 pupils to come forward. As each comes forward, they should loudly say their number. 4) Give the 10 volunteers a pile of stones. Say different numbers, and ask them to count the corresponding stones.
PRACTICE  10 minutes	1) Form groups of 3-5 pupils. Make sure there is one advanced learner in each group who can be the group leader. 2) Give each group a set of counters. Say a number between 1 and 10 and ask the group to count the correct number of stones. The advanced learner should help the others count. Make sure all learners have a turn. 3) Continue saying different numbers for learners to count. Circulate to monitor groups and make sure all learners are counting.

WRITE  15 minutes	1) Write numbers 1-5 on the board, and ask learners to review them by writing in the air with you. 2) Show pupils how to write the number 6 in the air and on the board. 3) Ask pupils to write the number 6 in the air and in their notebooks (or the sand). Advanced learners should help beginners. 4) Repeat the previous steps with the number 7 and the number 8. 5) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 6) Under each number, write a slash mark and ask pupils to help you count it. 6 ///// 7 //////// 8 /////////
ASSESS  10 minutes	1) Point to numbers 1-10 on the board, and ask pupils to say each number. 2) Play “true or false.” Write a number on the board and say the name of the number. Sometimes say the correct name, sometimes say the incorrect name. Pupils will tell you if it is true or false. (For example, if you write “2” and say “two,” they should say true. If you write “2” and say “three,” they should say false). If it is false, then ask them to tell you the correct answer. 2) If time permits, ask a pupil to lead the game of true or false on the board.
SUMMARIZE 5 minutes	1) Ask pupils what they have learned today. 2) Ask pupils to practice writing numbers 6, 7 and 8 at home.

LESSON PLAN 2.2: MATH

TOPIC	Counting 1-10
LEARNING OUTCOME	Learners will be able to count up to 10 Learners will be able to write numbers 9 and 10
MATERIALS REQUIRED	Pattern flash cards 1-10 Paper and pencils for the pupils
WARM-UP  5 minutes	<u>Wakar Kirge</u> Ɗaya mafarin kirge, Biyu idanun dabba, Uku duwatsun murhu, Huƙu kafafun tebur, Biyar na yatsun hannu.
LEARN  15 minutes	1) Say: Today we will count from 1 to 10 and write numbers 9 and 10. 2) Write numbers 1-10 on the board and ask learners to recite them with you. 3) Show pattern cards with different number of dots up to 10. Ask learners to identify the number of dots they see. Once a volunteer learner to identify the number and to match the card to the number written on the board. 

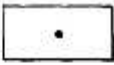
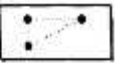
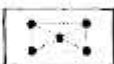
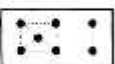
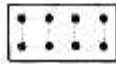
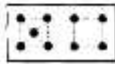
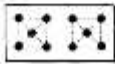
PRACTICE  10 minutes	1) Form groups of 5 pupils. Make sure there is one advanced pupil in each group who can be a group leader. 2) Point to a number at random on the board. Ask learners to count the stones. Circulate to assist. 3) Point to several more numbers for learners to count. Then ask a learner to point to numbers on the board.
WRITE  10 minutes	1) Show pupils how to write the number 9 in the air and on the board. 2) Ask pupils to write the number 9 in the air and in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with the number 10. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 5) Under each number, write a slash mark and ask pupils to help you count it. 9 //////// 10 ////////
ASSESS  5 minutes	1) Point at random to the numbers written on the board. Ask pupils to name the number, then hold up the correct number of fingers to represent the number.
READ ALOUD  15 minutes	1) Read aloud “Gari Mai Bishiyar Kade Goma,” and ask the comprehension questions. 2) Ask pupils what numbers they heard in the story. 3) Ask pupils what they learned today.

LESSON PLAN 3.1: MATH

TOPIC	- Counting 1-10 - Concept of 0
LEARNING OUTCOME	- Learners will be able to count backwards from 10 - Learners will be able to identify and define 0
MATERIALS REQUIRED	- Sticks and stones - Paper and pencils for the pupils
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci ɗaya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  10 minutes	1) Say: Today we will learn about 0. 2) Hold up 10 fingers. Help pupils to count backwards from 10 with you. Put one finger down with each number they say. After you put down your last finger, ask pupils how many fingers are left. They should say “none.” 3) Hold up 10 sticks. Help pupils to count backwards from 10. Put one stick down for each number they count. After you put down the last stick, ask pupils how many sticks are left. They should say “none.” 4) Explain that when we have “none” in math, we say “zero.” Write: 0 1 2 3 4 5 6 7 8 9 10 Point to the numbers while learners count backwards from 10 to 0.

PRACTICE  10 minutes	1) Form groups of 3-5 pupils. Make sure there is one advanced learner in each group as the group leader. 2) Give each group a set of counters. Say a number between 0 and 10 and ask the group to count the correct number of stones. If you say 0, then learners should clear their stones. 3) Continue saying different numbers for learners to count. Circulate to monitor groups and make sure all learners are counting.
WRITE  10 minutes	1) Show pupils how to write the number, first in the air and then on the board 0. 2) Ask pupils to write the number 0 in the air, then in their notebooks (or the sand). 3) Ask pupils to write 0 on the board.
ASSESS  5 minutes	1) Play “true or false.” Write a number on the board and say the name of the number. Sometimes say the correct name, sometimes say the incorrect name. Pupils will tell you if it is true or false. (For example, if you write “2” and say “two,” they should say true. If you write “2” and say “three,” they should say false). If it is false, then ask them to tell you the correct answer. 2) If time permits, ask a pupil to lead the game of true or false on the board.
SUMMARIZE  5 minutes	1) Ask pupils what they have learned today. 2) Ask pupils to practice writing 0 at home.

LESSON PLAN 3.2: MATH

TOPIC	Counting 1-10
LEARNING OUTCOME	Learners will be able to count forward and backward from 10 Learners will be able to write numbers numbers 0-10
MATERIALS REQUIRED	Pattern flash cards 0-10 Paper and pencils for the pupils
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  10 minutes	1) Write numbers 0-10 on the board and ask learners to recite them forwards and backwards with you. 2) Show pattern cards from 0 - 10. Ask learners to identify the number of dots they see. Once a learner has identified the number, he or she should match the card to the number written on the board.           
PRACTICE 	1) Form groups of 5 pupils. 2) Point to a number at random on the board. Ask learners to count the stones. Circulate to assist.

10 minutes	3) Point to several more numbers for learners to count. Then ask a learner to point to numbers on the board.
WRITE  15 minutes	1) Ask pupils to write numbers 0-10, or as many numbers as time allows. First they can write in the air, naming each number. They can write in notebooks or in the sand. 2) Circulate to assist.
ASSESS  5 minutes	1) Point at random to the numbers written on the board. Ask pupils to name the number, then hold up the correct number of fingers to represent the number. For “zero,” pupils can hold up a fist.
READ ALOUD  15 minutes	1) Read aloud “Jakar Ilu Mai Zama Fanko,” and ask the comprehension questions. 2) Ask pupils where they heard zero in the story. 3) Ask pupils what they learned today.

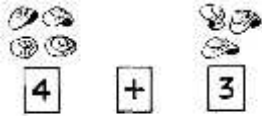
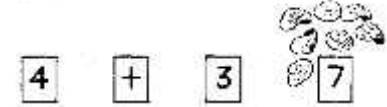
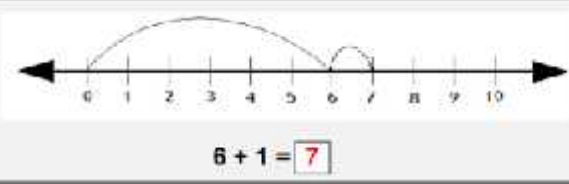
LESSON PLAN 4.1: MATH

TOPIC	Addition within 10	
OBJECTIVES	- Learners will be able add within 10 using objects - Learners will be able to recognize the plus and equal signs	
MATERIALS	5 sticks - Counters (stones, seeds, or other small objects) - Paper and pencils for pupils	
WARM-UP  5 minutes	<u>Wakar Kirge</u> Daya mafarin kirge, Biyu idanun dabba, Uku duwatsun murhu, Hudu kafafun tebur, Biyar na yatsun hannu.	Shida kafafun sauro. Bakwai kwanakin mako. Takwas goma ba biyu kenan. Tara daga ke sai goma. Goma biyar biyu kenan.
LEARN  10 minutes	1) Say: Today we will learn to add within 10. 2) Name 5 pupils to come to the front of the class. Ask how many pupils there are. 3) Call 3 more pupils, then say: 3 more pupils joined the group. Now how many pupils are there in all? Say: 5 pupils and 3 pupils make 8 altogether. 4) Hold up 2 sticks in one hand and 3 in the other. Ask pupils how many you have in each hand. 5) Move your hands together to combine the sticks. Ask pupils how many you have in all. Say: 3 sticks and 2 sticks makes 5 altogether. Combining similar groups together like this is called addition. 6) Repeat step 5 with different numbers of sticks.	

PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Give each group a set of 10 stones. 2) Say: One person in your group should count out 4 stones. Make sure a person in each group selects 4 stones. Say: Another person in your group should count out 3 stones. Make sure a person in each group selects an additional 3 stones. Say: How many stones do you have in all? 3) Repeat step 2 many times with different numbers.
ASSESS  5 minutes	1) Explain to pupils that you will say an addition problem. For each number that you say, they should hold up the correct number of fingers, then say the answer. 2) Say: There are 5 birds in the tree. 2 more fly in. How many birds are there altogether? 3) Repeat step 2 several times, using different numbers.
WRITE  15 minutes	1) Say: Addition uses a special sign called plus. The plus means we are combining the two groups together. 2) Write:  +  3) Say: For example, if I add three stones and two stones, I can write plus in the middle to show I combine them. 4) Say: To create the total, I write a sign called equals. 5) Write:  +  =  6) Ask pupils to write the equation in their notebooks.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice addition at home.

LESSON PLAN 4.2: MATH

TOPIC	Addition within 10	
OBJECTIVES	- Learners will be able to add within 10 - Learners will be able to solve written addition problems	
MATERIALS	- Picture cards - Paper and pencils for pupils	
WARM-UP  5 minutes	<u>Wakar Kirge</u> Daya mafarin kirge, Biyu idanun dabba, Uku duwatsun murhu, Hudu kafafun tebur, Biyar na yatsun hannu.	Shida kafafun sauro. Bakwai kwanakin mako. Takwas goma ba biyu kenan. Tara daga ke sai goma. Goma biyar biyu kenan.
LEARN  5 minutes	1) Say: What did we learn in our last class? Say: Last class we learned about addition. Addition means combining similar groups together. 2) Name 4 pupils to come to the front of the class. Say: How many pupils are here? 3) Call 2 more pupils. Say: Two more pupils joined the group. Now how many pupils are there altogether? Say: 4 pupils and 2 pupils make 6 altogether. Remember that the plus sign means we combine groups together. Write: $4 + 2 = 6$ 4) If time allows, repeat with different numbers.	
PRACTICE 	1) Form groups of 3-5 pupils. Give each group 10 stones, 2 number cards, and a plus and equal sign card 2) Ask groups to make the equation. Provide an example if needed.	

15 minutes	  3) Ask pupils to switch one of their cards with another group, then form the new equation. Continue until 20 minutes is up.
EXTENDED PRACTICE 10 minutes	1) Write a number line on the board. Show learners how they can use the number line to add. Example:  2) Give learners different equations. Call different learners to the board
WRITE  15 minutes	1) Ask learners to copy a number line into their notebooks. 2) Ask learners to solve this equation using the number line: $5 + 4 =$
READ ALOUD  10 minutes	1) Read aloud “Tani Da Kyanwa,” and ask the comprehension questions. 2) Ask pupils where they heard addition in the story. 3) Ask pupils what they learned today.

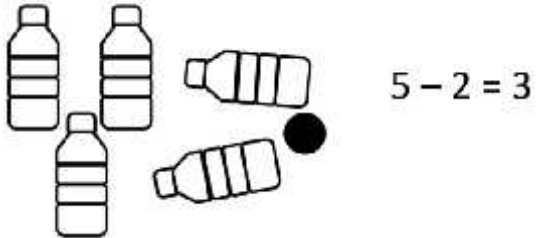
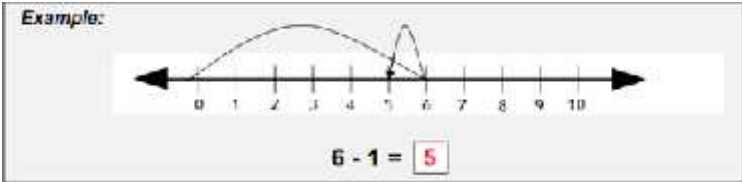
LESSON PLAN 5.1: MATH

TOPIC	Subtraction within 10
OBJECTIVES	- Learners will be able to subtract within 10 using objects - Learners will be able to recognize the minus and equals signs
MATERIALS	5 sticks - Counters (stones, seeds, or other small objects) - Paper and pencils for pupils
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci ɗaya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  10 minutes	1) Say: Today we will learn to subtract within 10. 2) Name 5 pupils to come to the front of the class. Ask how many pupils there are. 3) Ask two of the pupils to sit down. Say: 2 pupils sat down. Now how many are left? Say: If you have 5, then take away 2, you are left with 3. 4) Hold up 4 sticks in one hand. Ask pupils how many you have. Then remove 1 and ask how many remain. Say: If you have 4 and take away 1, you are left with 3. Taking away numbers in this way is called subtraction. 5) Repeat step 4 with different numbers of sticks.

PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Give each group a set of 10 stones. 2) Say: Each group should count out 6 stones. Make sure a person in each group selects 6 stones. 3) Say: Now remove 2 stones from the group of 6. How many stones are left? Ensure groups complete this step. 4) Repeat steps 2-3 many times with different numbers. Make sure pupils take turns counting stones.
ASSESS  5 minutes	1) Explain to pupils that you will say a subtraction problem. After you say the first number in the problem, they should hold up the correct number of fingers. After you say the second number, they should put down the corresponding number of fingers. 2) Say: There are 5 birds in the tree. 2 fly away. How many birds are left? 3) Repeat step 2 several times, using different numbers.
WRITE  15 minutes	1) Say: For addition, we used a special sign called plus. For subtraction, we use a special sign called minus. The minus sign means we are taking something away. For example, if I have three stones, then take away two, I can use the minus to show I am taking them away. 2) Write:  3) Say: To indicate the total that remains, I write a sign called equals.  4) Write: 5) Ask pupils to write the equation in their notebooks.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice subtraction at home.

LESSON PLAN 5.2: MATH

TOPIC	Subtraction within 10
OBJECTIVES	- Learners will be able to subtract within 10 - Learners will be able to solve written subtraction problems
MATERIALS	10 bottles - Ball or rock - Paper and pencils for pupils
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  10 minutes	1) Say: What did we learn in our last class? Say: Last class we learned about subtraction. Subtraction means taking something away. Let's practice this concept further. 2) Name 5 pupils to come to the front of the class. Ask how many pupils there are. 3) Ask two of the pupils to sit down. Say: 2 pupils sat down. Now how many are left? Write: $5 - 2 = 3$ Say: Remember the minus sign means we take something away. 4) Hold up 4 sticks in one hand. Ask pupils how many you have. Then remove 2 and ask how many remain. Write: $4 - 2 = 2$

PRACTICE  15 minutes	1) Set up five bottles. Ask a pupil to throw a rock or ball at the bottles to see how many were knocked down. Then help the pupil write the equation on the board. Example:  2) Once pupils have mastered the game with 5 bottles, set up 10 bottles and continue the game.
EXTENDED PRACTICE 10 minutes	1) Write a number line on the board. Show learners how they can use the number line to add.  2) Give learners different equations. Call different learners to the board
WRITE  15 minutes	1) Ask learners to copy a number line into their notebooks. 2) Ask learners to solve this equation using the number line: $7 - 4 =$
READ ALOUD  15 minutes	1) Read aloud “Asabe Ta Koyi Darasi,” and ask the comprehension questions. 2) Ask pupils where they heard subtraction in the story. 3) Ask pupils what they learned today.

LESSON NUMBER 6.1: PRACTICE AND ASSESSMENT																					
CLASS	Math assessment																				
OBJECTIVES	10 pupils will take a one-on-one math test - Remaining pupils will complete math problems																				
MATERIALS	1) Paper and pencils for pupils																				
BEFORE CLASS BEGINS	1) Before class begins, write the following math problems on the board: <table><tr><td>1 + 2 =</td><td>4 + 3 =</td><td>6 - 2 =</td><td>4 - 3 =</td></tr><tr><td>2 + 2 =</td><td>6 + 1 =</td><td>5 - 2 =</td><td>6 - 1 =</td></tr><tr><td>3 + 2 =</td><td>7 + 2 =</td><td>4 - 2 =</td><td>7 - 2 =</td></tr><tr><td>4 + 2 =</td><td>4 + 5 =</td><td>3 - 2 =</td><td>4 - 5 =</td></tr><tr><td>5 + 2 =</td><td>5 + 5 =</td><td>2 - 2 =</td><td>5 - 5 =</td></tr></table>	1 + 2 =	4 + 3 =	6 - 2 =	4 - 3 =	2 + 2 =	6 + 1 =	5 - 2 =	6 - 1 =	3 + 2 =	7 + 2 =	4 - 2 =	7 - 2 =	4 + 2 =	4 + 5 =	3 - 2 =	4 - 5 =	5 + 2 =	5 + 5 =	2 - 2 =	5 - 5 =
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ASSIGN PAIR WORK 10 minutes	1) Ask learners to sit in pairs. An advanced learner should sit with a beginning learner. 2) Distribute paper and pencils. Explain that learners should copy and solve each problem on the board. 3) Choose 10 learners at random. Explain that you will call then one by one during the class to take an assessment.																				
ASSESSMENT 45 minutes	1) Call the first learner. Sit in a quiet place separate from other learners. 2) Explain to the learner that you will ask a few math questions. 3) Show the learner the numbers and math problems. For numbers, learners should simply name the number in Hausa. For addition and subtraction, the learner should solve each problem. After each task, mark the total correct, making note of difficulties. During the assessment, do not help the learner or give away the answers. You can help the learner in the next lesson. 4) Call the next learner who was selected. Repeat steps 1-3. Continue until you have tested all 10 learners.																				
CLOSING 5 minutes	1) Ask learners to hold up their papers to show what they have written. 2) Collect the papers for correction.																				

9

4

0

6

3

8

2

10

$$2 + 3 =$$

$$1 + 1 =$$

$$5 + 4 =$$

$$6 + 0 =$$

$$4 - 2 =$$

$$3 - 3 =$$

$$6 - 1 =$$

$$9 - 5 =$$

Name	Numbers correct	Addition correct	Subtraction correct	Notes
1.	/8	/4	/4	
2.	/8	/4	/4	
3.	/8	/4	/4	
4.	/8	/4	/4	
5.	/8	/4	/4	
6.	/8	/4	/4	
7.	/8	/4	/4	
8.	/8	/4	/4	
9.	/8	/4	/4	
10.	/8	/4	/4	
Observations:				

Teacher signature:_____

Date: _____

LESSON NUMBER 6.2: REVIEW AND REINFORCEMENT	
TOPIC	Review
OBJECTIVES	
MATERIALS	
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected assignment from the previous day. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	
CLOSING 5 minutes	

LESSON PLAN 7.1: MATH

TOPIC	) Counting 1-20
OBJECTIVES	) Learners will be able to count up to 20) Learners will be able to write numbers 11-15
MATERIALS REQUIRED	) Hundreds chart) sticks) Number cards 11-20) Paper and pencils for the pupils
WARM-UP  5 minutes	<u>Wakar Kirge</u> Shida kafafun sauro. Bakwai kwanakin mako. Takwas goma ba biyu kenan. Tara daga ke sai goma. Goma biyar biyu kenan.
LEARN  15 minutes	1) Say: Today we will count from 11 to 20 and learn to write numbers 11-15. First, we will review numbers 1-10. 2) Ask a learner to point to numbers 1-10 on a hundreds chart while the rest of the class counts. 3) Ask questions about numbers 1-10: (For example, How many legs does a table have? How many legs does a mosquito have? How many fingers on one hand? On both hands?) 4) Count from 1-20 on the hundreds chart, pointing to teach number. Ask pupils to count with you. 5) Count out 20 sticks one by one so that the class can see. Ask for the class to count with you. 6) Ask the class to help you count twenty pupils. They should stand as you count them.

PRACTICE  10 minutes	1) Play a game called Pick and Count. Put number cards 11-20 face down in a pile. 2) Call a learner to pick a card from the pile. The learner should name the number, then count out a corresponding number of sticks. 3) Repeat steps 1 and 2 with multiple learners.
WRITE  15 minutes	1) Show pupils how to write the number 11. 2) Ask pupils to write the number 11 in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with numbers 12, 13, 14 and 15. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number.
ASSESS  10 minutes	1) Draw a flash card at random. Ask pupils to name the number. Then call a pupil to the front to match it to the hundreds chart. Repeat with different flash cards.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice writing numbers 11-15 at home.

LESSON PLAN 7.2: MATH

TOPIC	Counting 1-20				
LEARNING OUTCOME	Learners will be able to count up to 20 Learners will be able to write numbers 16, 17, 18, 19 and 20				
MATERIALS REQUIRED	Hundreds chart Paper and pencils for the pupils Sticks and rubber bands				
WARM-UP	Tell learners the following story: Alhaji Mato is a trader. Many people go to his store to buy things. Very often, he has problem giving correct change. As a result, his customers became angry with him and deserted him.				
5 minutes	Why do you think Alhaji Mato has a problem with giving change? Learners should explain that his main problem is lack of mathematic and for a trader to be successful he must be good in mathematics				
LEARN  15 minutes	1) Say: Yesterday we learned about counting 1-20. Today we will learn about the tens place and the ones place. 2) Count from 1-20 pointing to the numbers chart. Ask learners to count with you. Only count with the learners once. 3) Count out 12 sticks. After you count the first ten, tie the ten sticks in a bundle.  Say: How many total sticks do I have? (12) Say: How many bundles of ten do I have? (1 bundle of 10) Say: How many sticks are not in the bundle? (2) Say: We can think of 12 as a bundle of 10, plus 2 units. 4) Write: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>T</td><td>U</td></tr> <tr> <td>1</td><td>2</td></tr> </table> Explain that the “T” is the tens and the “U” is the units. 5) Repeat the process different numbers such as 14, 11, 17.	T	U	1	2
T	U				
1	2				

PRACTICE  15 minutes	1) Form groups of 5 pupils. Give each group 20 sticks and 1 rubber band. 2) Say a number between 11 and 20. Ask learners to count out the corresponding number of sticks. They should make a bundle of ten, plus the units. 3) Ask the learner to write the number in a table on the board: <table border="1" data-bbox="1333 520 1500 606"> <tr> <td>T</td><td>U</td></tr> <tr> <td></td><td></td></tr> </table> 4) Repeat the process with different numbers.	T	U		
T	U				
WRITE  10 minutes	1) Show pupils how to write the number 16. 2) Ask pupils to write the number 16 in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with numbers 17, 18, 19 and 20. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number.				
ASSESS  5 minutes	Play a writing game. Ask a learner to call a number between 1 and 20 and challenge the rest of the class to write it down.				
READ ALOUD  10 minutes	1) Read aloud “Kaka Da Jikokinta Goma Sha Tara,” and ask the comprehension questions. 2) Ask pupils what numbers they heard in the story. 3) Ask pupils what they learned today.				

LESSON PLAN 8.1: MATH

TOPIC	Addition within 20
OBJECTIVES	- Learners will be able add within 20 (using objects) - Learners will be able to write sums vertically
MATERIALS	200 small sticks - Paper and pencils for pupils
WARM-UP  5 minutes	Daya ga daya, Biyu kenan Biyu ga daya, uku kenan Uku ga daya huđu kenan Huđu ga daya
LEARN  10 minutes	1) Say: Today we will learn to add within 20. Remember that addition means combining similar groups. 2) Name 8 pupils to come to the front of the class. Ask how many pupils there are. 3) Call 7 more pupils, then say: 7 more pupils joined the group. Now how many pupils are there in all? Say: 8 pupils and 7 pupils make 15 altogether. Remember that when we add groups together, we use the plus sign. Write: $8 + 7 = 15$ 4) Hold up 6 sticks in one hand and 5 in the other. Ask pupils how many you have in each hand. 5) Move your hands together to combine the sticks. Ask pupils how many you have in all. Say: 6 sticks and 5 sticks makes 11 altogether. Write: $6 + 5 = 11$

PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Give each group a set of 20 sticks. 2) Say: One person in your group should count out 9 sticks. Make sure a person in each group selects 9 sticks. Say: Another person in your group should count out 5 sticks. Make sure a person in each group selects an additional 5 sticks. Say: How many sticks do you have in all? Say: Can you organize the number into tens and units? 3) Repeat step 2 many times with different numbers.
ASSESS  5 minutes	1) Write: $9 + 8 =$ 2) Ask learners to solve the problem by counting their sticks. Then ask a learner to write the correct answer on the board.
WRITE  15 minutes	1) Say: We can write the same addition problem two different ways: horizontally and vertically. Today, we will practice both. 2) Write: $9 + 8 = 17$ $\begin{array}{r} 9 \\ +8 \\ \hline 17 \end{array}$ 3) Ask pupils to copy both equations. If time permits, write another example.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice addition at home.

LESSON PLAN 8.2: MATH

TOPIC	Addition within 20
OBJECTIVES	- Learners will be able to add within 20 - Learners will be able to solve written addition problems
MATERIALS	- Number cards - Paper and pencils for pupils
WARM-UP  5 minutes	Biyar ga daya shida kenan Shida ga daya Bakwai kenan Bakwai ga daya Takwas kenan Takwas ga daya Tara kenan Tara ga daya Goma kenan
LEARN  10 minutes	1) Say: What did we learn in our last class? Say: Last class we learned about addition by counting sticks. We also learned how to write sums vertically. Today, we will continue practicing addition. 2) Say: I'm going to tell you a story, and I want a volunteer to write the equation on the board. Say: Amina bought 7 apples and 12 oranges. How much fruit did she buy altogether? A pupil should write the correct sum. $ \begin{array}{r} 7 \\ +12 \\ \hline 19 \end{array} $ 3) Say: Musa bought 10 masa in the morning and 5 more in the evening. How much did he buy altogether? A pupil should write the correct sum.

PRACTICE  15 minutes	1) Form groups of 3-5 pupils. Give each group 2 number cards with a sum less than 20. Ask each group to put the two numbers into an equation and copy it into their exercise books. For example, if groups receive 14 and 4, they should write: $\begin{array}{r} 4 \\ +14 \\ \hline 18 \end{array}$ 2) Ask groups to exchange number cards and repeat the process.
ASSESS  5 minutes	1) Say: Ladi has 6 chickens and Abba has 11. How many do they have altogether? 2) Ask learners to write the correct answer in their notebooks and hold it up.
WRITE  10 minutes	Write: Ask pupils to copy and solve the problems, being mindful of the 10s and units place. Then ask pupils to show the correct answer on the board. $\begin{array}{r} 10 \\ +10 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +11 \\ \hline \end{array}$
READ ALOUD  15 minutes	1) Read aloud “Na Gari Na Kowa,” and ask the comprehension questions. 2) Ask pupils where they heard addition in the story. 3) Ask pupils what they learned today.

LESSON PLAN 9.1: MATH

TOPIC	Subtraction within 20
OBJECTIVES	- Learners will be able to subtract within 20 using objects - Learners will be able to recognize the minus and equals signs
MATERIALS	- sticks - Counters (stones, seeds, or other small objects) - Paper and pencils for pupils
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  10 minutes	1) Say: Today we will learn to subtract within 20. 2) Name 15 pupils to come to the front of the class. Ask how many pupils there are. 3) Ask 5 of the pupils to sit down. Say: 5 pupils sat down. Now how many are left? Say: If you have 15, then take away 5, you are left with 10. Remember that we use the minus sign to show we are taking something away. Write: $15 - 5 = 10$ 4) Hold up 11 sticks in one hand. Ask pupils how many you have. Then remove 3 and ask how many remain. Say: If you have 11 and take away 3, you are left with 8. Taking away numbers in this way is called subtraction. Write: $11 - 3 = 8$

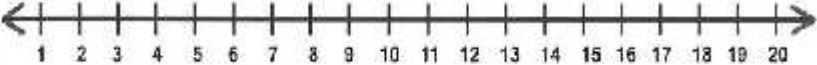
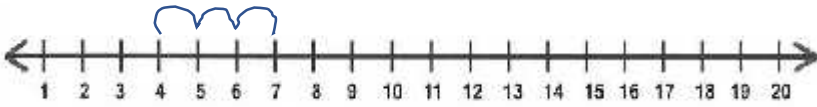
PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Give each group a set of 20 stones. 2) Say: Each group should count out 11 stones. Make sure a person in each group selects 11 stones. 3) Say: Now remove 3 stones from the group of 11. How many stones are left? Ensure groups complete this step. 4) Write: $11 - 3 = 7$ 5) Repeat these steps many times with different numbers.
ASSESS  5 minutes	1) Write: $17 - 6 =$ 2) Ask learners to solve the problem by counting their stones. Then ask a learner to write the correct answer on the board.
WRITE  15 minutes	1) Say: We learned how to write addition problems two different ways. We can also write subtraction problems two different ways. Today, we will practice both. In a vertical equation, the large number should always go on top, and the smaller number goes on the bottom. You begin by subtracting at the units' place. 2) Write: $17 - 6 = 11$ $\begin{array}{r} 17 \\ - 6 \\ \hline 11 \end{array}$ 3) Ask pupils to copy both equations. If time permits, write another example and ask them to solve it.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice subtraction at home.

LESSON PLAN 9.2: MATH

TOPIC	Subtraction within 20
OBJECTIVES	- Learners will be able to subtract within 20 - Learners will be able to solve written subtraction problems
MATERIALS	- Bottles - Rock or stone - Paper and pencils for pupils
WARM-UP  5 minutes	Biyar ga ɗaya shida kenan Shida ga ɗaya Bakwai kenan Bakwai ga ɗaya Takwas kenan Takwas ga ɗaya Tara kenan Tara ga ɗaya Goma kenan
LEARN  10 minutes	1) Say: Last class we learned about subtraction by counting stones. We also learned how to subtract vertically. Today, we will continue practicing subtraction. 2) Say: I'm going to tell you a story, and I want a volunteer to write the equation on the board. Say: Amina bought 16 apples and gave 8 away. How many did she have left? A pupil should write the correct sum. $ \begin{array}{r} 16 \\ - 8 \\ \hline \end{array} $ 3) Say: Musa had 20 Naira and spent 10. How much does he have left? A pupil should write the correct sum.

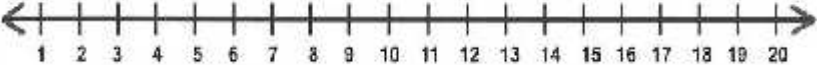
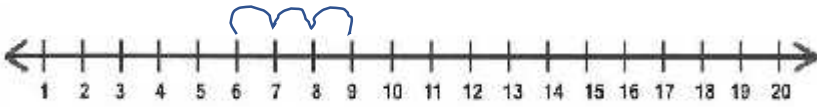
PRACTICE  15 minutes	1) 1) Set up 20 bottles. Ask a pupil to throw a rock or ball at the bottles to see how many were knocked down. Then help the pupil write the equation on the board. Example: 
ASSESS  5 minutes	1) Say: 20 bottles are set up, and 9 get knocked down. How many remain standing? 2) Ask learners to write the correct answer in their notebooks and hold it up.
WRITE  10 minutes	Write: Ask pupils to copy and solve the problems, being mindful of the 10s and units place. Show pupils how to subtract each column of numbers, beginning with the units. $\begin{array}{r} 15 \\ - 10 \\ \hline \end{array}$ $\begin{array}{r} 18 \\ - 12 \\ \hline \end{array}$ $\begin{array}{r} 19 \\ - 15 \\ \hline \end{array}$
READ ALOUD  15 minutes	1) Read aloud “Wani Sarki Da Munduwa,” and ask the comprehension questions. 2) Ask pupils where they heard subtraction in the story. 3) Ask pupils what they learned today.

LESSON PLAN 10.1: MATH

TOPIC	Addition within twenty
OBJECTIVES	✓ Learners will be able to add with a number line
MATERIALS	✓ Paper and pencils for pupils
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci ɗaya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: We have been practicing our addition and subtraction. Today, we will practice our addition with a number line. A number line helps us visualize addition. 2) Write:  3) Say: If I want to add $4 + 3$, then I can start at the number 4 and count 3 more lines to the right. Then I get my answer. Draw your counting on the number line:  4) Give one or two additional examples. Then give an equation to a pupil and ask them to try.

PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Ask each group to draw a number line from 1-20. 2) Say: On your number line, add 5 + 5. Circulate to check the groups. Then ask a pupil to solve it on the board. 3) After you have checked the groups, ask them to erase any marks on the page. Then give them a new equation. 4) Repeat these steps many times with different numbers.						
ASSESS  5 minutes	1) Say an equation and ask learners to point to the correct answer on their number line. For example, if you say 4 + 5, they should point to 9 on the number line.						
WRITE  15 minutes	1) Say: Copy and solve each of these problems and check the answer on your number line. 2) Write: <table><tr><td>16</td><td>11</td><td>9</td></tr><tr><td><u>+3</u></td><td><u>+7</u></td><td><u>+8</u></td></tr></table>	16	11	9	<u>+3</u>	<u>+7</u>	<u>+8</u>
16	11	9					
<u>+3</u>	<u>+7</u>	<u>+8</u>					
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice subtraction at home.						

LESSON PLAN 10.2: MATH

TOPIC	Subtraction within 20
OBJECTIVES	✓ Learners will be able to subtract with a number line
MATERIALS	✓ Paper and pencils for pupils
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci ɗaya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: We have been practicing our addition with a number line. Today, we will practice our subtraction with a number line. For subtraction, we simply count in the opposite direction. 2) Write:  3) Say: If I want to add $9 - 3$, then I can start at the number 9 and count 3 more lines to the left. Then I get my answer. Draw your counting on the number line:  4) Give one or two additional examples. Then give an equation to a pupil and ask them to try.

PRACTICE  20 minutes	1) Form groups of 3-5 pupils. Ask each group to draw a number line from 1-20. 2) Say: On your number line, add 10 - 5. Circulate to check the groups. Then ask a pupil to solve it on the board. 3) After you have checked the groups, ask them to erase any marks on the page. Then give them a new equation. 4) Repeat these steps many times with different numbers.						
ASSESS  5 minutes	1) Say an equation and ask learners to point to the correct answer on their number line. For example, if you say 12 - 4, they should point to 8 on the number line.						
WRITE  15 minutes	1) Say: Copy and solve each of these problems and check the answer on your number line. 2) Write: <table><tr><td>16</td><td>11</td><td>9</td></tr><tr><td><u>-3</u></td><td><u>-7</u></td><td><u>-8</u></td></tr></table>	16	11	9	<u>-3</u>	<u>-7</u>	<u>-8</u>
16	11	9					
<u>-3</u>	<u>-7</u>	<u>-8</u>					
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice subtraction at home.						

LESSON PLAN 11.1: MATH

TOPIC	) Counting 1-50
OBJECTIVES	) Learners will be able to count up to 50) Learners will be able to write numbers 21-30
MATERIALS REQUIRED	) Hundreds chart) sticks) Number cards 20-50) Paper and pencils for the pupils
WARM-UP  Game	Game: Explain to learners that you will say a number. As soon as you say it, they should start counting up from that number as fast as they can. For example, if you say “7,” learners should start saying “8, 9 10, 11...”. After a few seconds, say “stop.” Then repeat the process with a new number.
LEAR  15 minutes	1) Say: Today we will count from 1-50 and learn to write numbers 10, 20, 30, 40, 50. 2) Count from 1-50 on the hundreds chart, pointing to teach number. Ask pupils to count with you. 3) Ask the class to help you count 50 pupils. Ask learners to look around in the vicinity and see if there is anything else they can count up to 50.
PRACTICE  15 minutes	1) Play a game called Pick and Count. Put number cards 1-50 face down in a pile. 2) Call a learner to pick a card from the pile. The learner should name the number, then count out a corresponding number of pupils or objects. 3) Repeat steps 1 and 2 with multiple learners.

WRITE  10 minutes	1) Show pupils how to write the number 10. 2) Ask pupils to write the number 10 in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with numbers 20, 30, 40 and 50. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 5) Help the learners count by 10s on the numbers chart up to 50.
ASSESS  10 minutes	1) Draw a flash card at random. Ask pupils to name the number. Then call a pupil to the front to match it to the hundreds chart. Repeat with different flash cards.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice counting to 50 at home.

LESSON PLAN 11.2: MATH

TOPIC	) Counting 1-50				
LEARNING OUTCOME	) Learners will be able to count up to 50) Learners will be able to distinguish between 10s and 1s				
MATERIALS REQUIRED	) 200 sticks) Rubber bands or string) Paper and pencils for the pupils				
WARM-UP	Tell learners the following story: Hajiya Kulu is preparing for food for a wedding. She has to know how much food she should make. How can mathematics help Hajiya Kulu make a good decision? 5 minutes				
LEARN  15 minutes	1) Say: Yesterday we learned about counting 1-50. Today we will learn about the tens place and the ones place, just like we did when we counted 1-20. 2) Count from 1-50 pointing to the numbers chart. Ask learners to count with you. Only count with the learners once. 3) Count out 25 sticks. After you count the first ten, tie the ten sticks in a bundle. Say: How many total sticks do I have? Say: How many bundles of ten do I have? Say: How many sticks are not in the bundle? Say: We can think of 25 as two bundles of 10, plus 5 units. 4) Write: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>T</td><td>U</td></tr> <tr> <td>2</td><td>5</td></tr> </table> Remind learners that the “T” is the tens and the “U” is the units. 5) Repeat the process different numbers such as 14, 11, 17.	T	U	2	5
T	U				
2	5				

PRACTICE  30 minutes	1) Divide the class into 4 groups. Give each group 50 sticks and 5 rubber bands. 2) Say a number between 20 and 50. Ask learners to count out the corresponding number of sticks. They should make a bundle of ten, plus the units. For example, if you say 32, they should make 3 bundles of 10, plus 2 units. 3) Ask the learner to write the number in a table on the board: 4) Repeat the process with different numbers. <table border="1" data-bbox="1333 569 1500 657"> <tr> <td>T</td><td>U</td></tr> <tr> <td></td><td></td></tr> </table>	T	U		
T	U				
WRITE  10 minutes	1) Ask learners to write a tens and units chart: <table border="1" data-bbox="1198 726 1365 814"> <tr> <td>T</td><td>U</td></tr> <tr> <td></td><td></td></tr> </table> 2) Give learners a number between 20 and 50, and ask them to write the correct numbers in the 10s and units space. 3) Repeat with different numbers.	T	U		
T	U				
ASSESS  5 minutes	Say a number and ask a learner to point to the correct number on the hundreds chart.				
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice counting to 50 at home.				

LESSON PLAN 12.1: MATH

TOPIC	) Counting 1-100
OBJECTIVES	) Learners will be able to count up to 100) Learners will be able to write numbers 60, 70, 80, 90, 100
MATERIALS REQUIRED	) Hundreds chart) Number cards 50-100) Paper and pencils for the pupils
WARM-UP  5 minutes	Game: Explain to learners that you will say a number. As soon as you say it, they should start counting up from that number as fast as they can. For example, if you say “7,” learners should start saying “8, 9 10, 11...”. After a few seconds, say “stop.” Then repeat the process with a new number.
LEARN  15 minutes	1) Say: Today we will count from 50-100 and learn to write numbers 50, 60, 70, 80, 90, 100 2) Count from 50-100 on the hundreds chart, pointing to each number. Ask pupils to count with you. 3) Ask the class to help you count 100 pupils. Ask learners to look around in the vicinity and see if there is anything else they can count up to 100.
PRACTICE  20 minutes	1) Put learners in groups of 5. Challenge each group to collect 100 stones or leaves. 2) When learners return, ask them to organize their 100 objects into 10 groups of ten. 3) Help learners verify their total by counting their groups of 10.

WRITE  10 minutes	1) Show pupils how to write the number 60. 2) Ask pupils to write the number 60 in their notebooks (or the sand). Advanced learners should help beginners. 3) Repeat the previous steps with numbers 70, 80, 90 and 100. 4) Ask pupils to come forward and write numbers on the board. After writing, each pupil should say the name of the number. 5) Help the learners count by 10s on the hundreds chart.
ASSESS  5 minutes	1) Point to a number on the hundreds chart. Ask learners to name the number.
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice counting to 100 at home.

LESSON PLAN 12.2: MATH

TOPIC	) Counting 1-100				
LEARNING OUTCOME	) Learners will be able to count up to 100) Learners will be able to distinguish between 10s and 1s				
MATERIALS REQUIRED	) 200 sticks) Rubber bands or string) Paper and pencils for the pupils				
WARM-UP	Game: Explain to learners that you will say a number. As soon as you say it, they should start counting up from that number as fast as they can. For example, if you say “7,” learners should start saying “8, 9 10, 11...”.				
5 minutes	After a few seconds, say “stop.” Then repeat the process with a new number.				
LEARN  15 minutes	1) Say: Yesterday we learned about counting 1-100. Today we will learn about the tens place and the ones place. 2) Count from 1-100 pointing to the numbers chart. Ask learners to count with you. Only count with the learners once. 3) Count out 55 sticks. After you count the first ten, tie the ten sticks in a bundle. Say: How many total sticks do I have? Say: How many bundles of ten do I have? Say: How many sticks are not in the bundle? Say: We can think of 55 as five bundles of 10, plus 5 units. 4) Write: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>T</td><td>U</td></tr> <tr> <td>5</td><td>5</td></tr> </table> Remind learners that the “T” is the tens and the “U” is the units. 5) Repeat the process different numbers such as 34, 21, 77.	T	U	5	5
T	U				
5	5				

PRACTICE  30 minutes	1) Divide the class into 2 groups. Give each group 100 sticks and 10 rubber bands. 2) Say a number between 50 and 100. Ask learners to count out the corresponding number of sticks. They should make a bundle of ten, plus the units. For example, if you say 62, they should make 6 bundles of 10, plus 2 units. 3) Ask the learner to write the number in a table on the board: 4) Repeat the process with different numbers. <table border="1" data-bbox="1333 569 1500 657"> <tr> <td>T</td><td>U</td></tr> <tr> <td></td><td></td></tr> </table>	T	U		
T	U				
WRITE  10 minutes	1) Ask learners to write a tens and units chart: <table border="1" data-bbox="1198 726 1365 814"> <tr> <td>T</td><td>U</td></tr> <tr> <td></td><td></td></tr> </table> 2) Give learners a number between 50 and 100, and ask them to write the correct numbers in the 10s and units space. 3) Repeat with different numbers.	T	U		
T	U				
ASSESS  5 minutes	Say a number and ask a learner to point to the correct number on the hundreds chart.				
SUMMARIZE 	1) Ask pupils what they have learned today. 2) Ask pupils to practice counting to 50 at home.				

LESSON NUMBER 13.1: ASSESSMENT	
CLASS	Math assessment
OBJECTIVES	1) Learners will take a math assessment
MATERIALS	1) Paper and pencils for pupils
INTRODUCTION 10 minutes	1) Explain to learners that they will take an exam. This exam will show what they have learned. First, they should write their name on the top of a blank piece of paper. You or advanced learners may have to assist the younger learners.
NUMBER DICTATION	1) Dictate the following numbers to learners verbally, without writing them on the board. Ask the learners to write the numbers down without looking at the papers of anyone else. 5 8 10 17 20 35 70 100
MATH PROBLEMS	1) Write the following problems on the blackboard. Ask learners to copy and solve each problem: $5 + 4 =$ $7 - 3 =$ 12 15 18 10 $6 + 2 =$ $12 - 4 =$ $\underline{+8}$ $\underline{+4}$ $\underline{-7}$ $\underline{-4}$
CLOSING Minti 5	1) Ask learners to turn in their papers as they leave. Check to make sure each paper has a name.

LESSON NUMBER 13.2: REVIEW AND REINFORCEMENT	
TOPIC	Review
OBJECTIVES	
MATERIALS	
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected tests from the previous lesson. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	
CLOSING 5 minutes	

LESSON PLAN 14.1: MATH

TOPIC	Units of time
OBJECTIVES	- Learners should be able to recognize units of time - Learners should be able to tell time on a clock in hours and half hours
MATERIALS REQUIRED	- Dummy clock - Broom sticks or twigs - Set of number cards (1 to 12) for small groups
WARM-UP  5 minutes	1) Say: What have we learnt so far in our math classes? 2) Say: So far, we have learnt about numbers, counting, addition and subtraction. Today we will start learning about time. 3) Ask learners when they do different activities, such as come to school, go to bed, eat dinner, etc. Learners may say general times, such as morning, evening, afternoon, after magrib, etc. 4) Say: “Morning” or “evening” is a nonstandard way of telling time. Can you think of any disadvantages to telling time this way?
LEARN  15 minutes	1) Say: A clock is used to tell time more accurately in hours and minutes. 2) Show a dummy clock (or draw a clock on the board). Explain that the short hand is the hour hand, and the long hand is the minute hand. 3) Use the dummy clock to explain how to read time in hours. Give many examples (3 o'clock, 7 o'clock, 9 o'clock, 2 o'clock, etc).  

	4) After learners seem confident in reading hours, show learners how to read time in half hours. Give many examples (half past 3, half past 7, half past 9, half past 2, etc).   5) Think back to the discussion at the beginning of class. What time do you wake up? What time do you think we go to school? What time do you eat lunch?
PRACTICE  10 minutes	1) Put learners in groups and give each group a set of number cards 1 to 12. 2) Tell them to arrange the cards on the floor to depict the face of a clock. 3) Using two sticks to serve as hands of the clock, ask them to show times such as: 3 o'clock, 7 o'clock, half past 1, etc.
WRITE  15 minutes	1) Draw a clock face on the board that says half past 10. 2) Tell learners to copy the face of the clock in their exercise books and say what time it is.
ASSESS  10 minutes	1) Show learners various times on the dummy clock and ask them to say what time it is. 2) If time permits, allow a learner to show times on the clock while the class identifies the time.
SUMMARIZE  5 minutes	1) Ask the learners to tell you what they have learnt today. 2) Ask the learners to tell you why clock is a better way of telling time than nonstandard measures of time. 3) Tell them to practice drawing face of clock at home.

LESSON PLAN 14.2: MATH

TOPIC	Units of time
OBJECTIVES	) Learners should be able to tell time on a clock in hours and in minutes) Learners should be able to use the notation of a.m. and p.m. for various times of the day
MATERIALS REQUIRED	) Dummy clock for class demonstration) Dummy clocks for small group work
WARM-UP  5 minutes	1) Say: Yesterday, we learned about hours. Does anyone know how many hours there are in a day? 2) Say: There are 24 hours in a day. The first 12 hours (from 12 midnight to 12 midday) are a.m. The second 12 hours (from 12 midday to 12 midnight) is p.m. Right now, is it a.m. or p.m.? 3) Ask learners to discuss their daily routines, and then say whether the activity is a.m. or p.m.
LEARN  15 minutes	1) Say: Today we will learn how to tell time more accurately in hours and minutes. We can show these minutes on a clock. 2) Use a dummy clock (or draw a clock on the board) that shows minute marks between hours. 3) Say: how many minutes are there between any two consecutive numbers? (Learners should say 5). 4) Say: How many minutes are there in an hour? Count by 5s around the clock. Learners should conclude that there are 60 minutes. Then ask how many minutes there are in a half hour. 5) Make the clock show 9:27. Say: The short hand shows hours. The long hand shows minutes. What time is shown here? 6) Demonstrate various times on the clock, each time asking the learners to recognize and read the time.



PRACTICE  10 minutes	1) Put learners in small groups and give each group a dummy clock. 2) Say “34 minutes past 7” and ask each group to make the time on the clock. The members of the group should agree whether it is correct or not. 3) Continue saying different times until all or most of the group members had a turn at showing a time.
WRITE  10 minutes	Say: There is an easier way of writing the time. Example, 27 minutes past 9 can be easily written as 9:27. Write: 9:27  Show more examples) Ask the learners to copy the face of clock on the board and write the time under it.) Ask learners to draw faces of a clock showing these times:) 7:45) 11:22
ASSESS  5 minutes	Show the following times on a clock face and ask learners to say the time. 1. 6:20 2. 5:15 3. 7:45 4. 10:13
READ ALOUD  15 minutes	1) Read aloud “Wani Sarki Wanda Ke Son Ya Rayu Har Abada,” and ask the comprehension questions. 2) Ask pupils what they heard about time in the story. 3. Ask pupils what they learned today.

LESSON PLAN 15.1: MATH

TOPIC	Relation among units of time
OBJECTIVES	) Learners should understand the concept of a second) Learners should be able to convert one unit of time to another (seconds to minutes, minutes to hours)
MATERIALS REQUIRED	) Clock with a second hand
WARM-UP  5 minutes	1) Play, “What is the time” game. Tell learners that you want to go to a naming ceremony and it takes 30 minutes from your house to the venue. Tell them you arrive at 11:30. Then ask what time you left your house. 2) Repeat the game again, using different times.
LEARN  10 minutes	1) Say: What did you learn in the last lesson?) How many minutes are in an hour? (60)) How many hours are there in a day? (24)) Which is a shorter period of time, a minute or an hour? 2) Say: There is a unit of time even smaller than a minute. A second is the smallest unit of measuring time. 3) Show the class a wall clock with a second hand. Ask the class to count as the second hand moves. Ask them how many seconds they could count in one complete turn (one minute). 4) Ask learners if they think they can hold their breath for 30 seconds. Time them on the clock. 5) Write the following problems on the board. Ask learners to complete the problem verbally, then ask volunteers to write the correct answer on the board. _____ seconds in a minute _____ minutes in an hour _____ hours in a day

PRACTICE



20 minutes

1) Write a list of tasks on the board. Ask learners to estimate how much time a task will take.

Task	Estimated time	Actual time
Walk round the class		
Write numbers 1 to 30		
Collect 10 stones		

2) Ask some learners to do the tasks on the chart. Time them, then write their actual time on the chart.

3) Ask learners to compare estimated and actual time.

WRITE



15 minutes

1) Ask the learners to copy the completed table above in their exercise books.

ASSESS



5 minutes

Tell pairs to ask each other questions about the number minutes in an hour, number of hours in a day. Ask pairs to share their questions and answers with the class.

SUMMARIZE



5 minutes

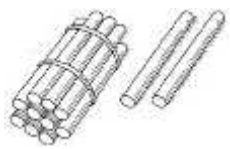
-) Ask learners what they have learnt today.
-) Ask learners when they might need to tell time in their daily lives.
-) Ask them to check whether their siblings and friends know how many seconds are in a minute.

LESSON PLAN 15.2: MATH

TOPIC	Relation among units of time
OBJECTIVES	- Learners should be able to change from one unit of time to another (minutes to hours, days to hours, etc). - Learners should be able to read dates on calendar
MATERIALS REQUIRED	- Calendar - Cards that say 7 days, 14 days, 21 days, 28 days, 1 week, 2 weeks, 3 weeks 4 weeks
WARM-UP  5 minutes	1) Play, "What is the time" game. Tell learners that you want to visit a friend and it takes an hour and a half to arrive at the venue. Tell them you arrive at 4:00 p.m. Then ask what time you left. 2) Repeat the game again, using different times.
LEARN  15 minutes	1) Say: What units of time have we learnt about so far? Are there other ways to measure time? 2) Ask learners what they do on various days of the week. Then ask what they do during various months of the year. 3) Show learners a calendar. Show them how to find days of the week. 4) Using the calendar, ask learners to help you count the number of days in a week, weeks in a month, and months in a year. 5) Show learners how to read dates on the calendar. Ask learners if they know their birthdate. Then ask them to find the date on the calendar. Repeat with different learners. 6) Ask learners how many days there are in one week, two weeks, three weeks and four weeks.

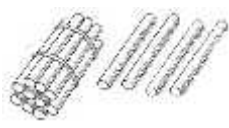
	7) Lay all of the day and weeks cards face down. Ask a learner to draw two cards. If the cards match (for example, one card says 14 days and the other card says 2 weeks) the learner can keep the card.
PRACTICE  10 minutes	1) Write the following on the board: i. Today is _____ ii. Yesterday was _____ iii. This month is _____ iv. Next month will be _____ v. There are _____ days in January vi. There are _____ days in a year 2) Tell the learners to discuss their responses in groups. Then ask for volunteers to fill in the blanks on the board. 3) Show learners how to check their answers with a calendar.
WRITE  10 minutes	1) Tell learners to copy the completed sentences in their exercise books
ASSESS  5 minutes	1) Say: How many weeks in a month? (4) How many months in a year? (12) How many weeks in a year? (52) How many days in a year? (365) 2) If time remains, say a date and ask a learner to find it in the calendar.
READ ALOUD  15 minutes	1) Read aloud “Ranar Haihuwar Talatu,” and ask the comprehension questions. 2) Ask pupils what they heard about time in the story. 3) Ask pupils what they learned today.

LESSON PLAN 16.1: MATH

TOPIC	Addition within 50
OBJECTIVES	- Learners should be able to use concrete objects to add within 50 - Learners should be able to use + and = signs correctly
MATERIALS REQUIRED	- Paper rolled into shape of a ball - Sticks tied in bundles of tens and units
WARM-UP  5 minutes	Play the “hot potato” game. Ask learners to stand in a circle and give them paper rolled into a ball. Tell them that it is a hot potato and should not hold it for long because it will burn them. Starting from 2, any person who catches the ball should add another 2 to the total and throw it to another. Any person that says wrong answer or allows the ball to remain with him longer than 5 seconds is out of the game.
LEARN  15 minutes	1) Say: What does addition mean? 2) Remind learners that addition is putting two or more groups of similar objects together. For example, 10 pencils + 6 pencils is 16 pencils. Show learners a bundle of ten plus six units. 3) Say: Today we will learn to add with larger numbers. Show learners bundles of sticks that represent 12 (one bundle of 10 plus 2 units) and 24 (two bundles of 10 plus 4 units).   4) Tell learners that a bundle of ten is counted as a “tens” unit. Two loose sticks would count as two “ones” units. Write T U, then 12 underneath. T U 1 2

	5) Ask learners what two bundles of ten plus four loose sticks would be. Add it to the equation. 6) Show learners how to combine the sticks to make 36. Then show them how to add the units and tens columns to get 36. Say: Two and four make six units, and one ten plus two tens makes thirty. That gives us 36.	T U 1 2 <u>2 4</u> 3 6
PRACTICE  10 minutes	1) Write these problems on the board, and ask learners to solve them in groups. They should first demonstrate the problem using sticks, and then add the units and tens on the board. 1. T U 2. T U 3. T U 2 4 1 6 2 4 + <u>2 1</u> + <u>1 3</u> + <u>5</u> _____ _____ _____ 2) Ask learners to come to the board to explain their answers.	
WRITE  15 minutes	Write the following problems on the board. Ask learners to copy them and write the correct answer in their books. 1. T U 2. T U 3. T U 1 2 1 8 2 4 + 1 9 + 2 0 + <u>1 5</u> _____ _____ _____	
ASSESS  10 minutes	1) Ask learners to check their answer with a friend. 2) Ask volunteers to write the answers on the board, explaining how they got their answers.	
SUMMARIZE  5 minutes	1) Ask the learners what they learnt today. Ask learners when they might use addition in their daily life. 2) Tell them to practice solving the following addition problems at home: T U T U T U 23 32 14 + <u>21</u> + <u>27</u> + <u>12</u>	

LESSON PLAN 16.2: MATH

TOPIC	Addition within 50
OBJECTIVES	- Learners should be able to add numbers within 50 involving crossing 10 - Learners should be able to solve a one-step word problem involving addition
MATERIALS REQUIRED	- Paper rolled into shape of a ball - Sticks tied in bundles of tens and units
WARM-UP 5 minutes	Play the “hot potato” game with addition of different numbers (for example, ask learners to add 3 instead of 2 each time they toss the “potato”).
LEARN  15 minutes	1) Say: There are 14 people at a wedding, and 23 more arrive. How many are there total? 2) Show learners how to represent this problem with addition and sticks:   $\begin{array}{r} 14 \\ +23 \\ \hline \end{array}$ 3) Say: There are 14 people at a wedding, and 27 more arrive. How many are there total?

	4) Explain that this is harder to solve, because the ones units add up to more than 10. Show how you can use sticks to create a new bundle of ten. In the equation, show how you add up the right-hand column, then bring the tens unit to the top of the left column and add it with the other tens units.   $\begin{array}{r} 14 \\ +27 \\ \hline 41 \end{array}$
PRACTICE  10 minutes	1) Write these problems on the board and distribute bundles of sticks. Ask learners to solve each problem with sticks, and then on the board. $\begin{array}{r} 24 \\ +19 \\ \hline \end{array}$ $\begin{array}{r} 16 \\ +15 \\ \hline \end{array}$ $\begin{array}{r} 18 \\ +26 \\ \hline \end{array}$ $\begin{array}{r} 25 \\ +25 \\ \hline \end{array}$
WRITE  10 minutes	2) Ask learners to copy the following problems in their books and solve them. $\begin{array}{r} 17 \\ +23 \\ \hline \end{array}$ $\begin{array}{r} 26 \\ +15 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ +28 \\ \hline \end{array}$
ASSESS  5 minutes	Say: Musa has 17 naira. His father gave him 22 naira. How much money does he have altogether? Ask learners to write the equation and solve it. Then ask a learner to solve the problem on the board.
READ ALOUD  15 minutes	1) Read aloud “Tsakanin Goggon Biri Da Sauran Dabbobin Dawa,” and ask the comprehension questions. 2) Ask pupils what they heard about addition in the story. 3) Ask pupils what they learned today.

LESSON PLAN 17.1: MATH

TOPIC	Subtraction within 50	
OBJECTIVES	$\bigcup$ Learners should be able to use concrete objects to subtract within 50 $\bigcup$ Learners should be able to use - and = signs correctly	
MATERIALS REQUIRED	$\bigcup$ Sticks in bundles of tens and units (for small group work)	
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: What does subtraction mean? Subtraction means taking away a objects from a group. For example, I could have 9 books and take away 4. We use the minus sign for subtraction. Equals shows what I am left with. 2) Write: 9 books – 4 books = 5 books. 3) Say: Today we will practice subtraction with double digit numbers. We will need to think about our tens and units. 4) Show learners 27 sticks, then take away 11 from the group. Ask learners how many are left. 5) Write: $\begin{array}{r} 27 \\ -11 \\ \hline \end{array}$ 6) Show learners how to solve the problem, starting with the ones unit. 	

PRACTICE  10 minutes	1) Put learners in small groups. Give each group a set of 30 sticks. 2) Say the following problems as you write them on the board. Ask groups to solve the problems using sticks. <table><tr><td>24</td><td>28</td><td>17</td><td>29</td></tr><tr><td><u>-10</u></td><td><u>-21</u></td><td><u>-11</u></td><td><u>-12</u></td></tr></table> 3) Call learners to write the answers on the board.	24	28	17	29	<u>-10</u>	<u>-21</u>	<u>-11</u>	<u>-12</u>
24	28	17	29						
<u>-10</u>	<u>-21</u>	<u>-11</u>	<u>-12</u>						
WRITE  15 minutes	Write these subtraction problems on the board. Ask learners to copy them in their books and solve them. <table><tr><td>34</td><td>28</td><td>36</td><td>16</td></tr><tr><td><u>-12</u></td><td><u>-18</u></td><td><u>-24</u></td><td><u>- 5</u></td></tr></table>	34	28	36	16	<u>-12</u>	<u>-18</u>	<u>-24</u>	<u>- 5</u>
34	28	36	16						
<u>-12</u>	<u>-18</u>	<u>-24</u>	<u>- 5</u>						
ASSESS  10 minutes	1) Ask learners hold their exercise books in the air to show they have finished. 2) Ask volunteers to write the answers on the board, explaining how they got their answers.								
SUMMARIZE  5 minutes	1) Ask the learners what they have learned today. Ask learners when they might need subtraction in their daily lives. 2) Tell them to practice solving the following addition problems at home: <table><tr><td>47</td><td>25</td><td>38</td></tr><tr><td><u>- 22</u></td><td><u>-15</u></td><td><u>- 26</u></td></tr></table>	47	25	38	<u>- 22</u>	<u>-15</u>	<u>- 26</u>		
47	25	38							
<u>- 22</u>	<u>-15</u>	<u>- 26</u>							

LESSON PLAN 17.2: MATH

TOPIC	Subtraction within 50	
OBJECTIVES	✓ Learners should be able to subtract numbers within 50, involving crossing 10 ✓ Learners should be able to solve a one-step word problem involving subtraction	
MATERIALS REQUIRED	1) Bundles of sticks for subtraction problems	
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu	Naci daya saura uku In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: What did you learn in our last math class? Last class, we learned about subtraction. Can you think of other words that mean “subtract?” (example: take away, minus, reduce, less) 2) Say: Today we will continue practicing subtraction. There are 47 oranges in a basket. If 22 are eaten, how many are left? 3) Write: $\begin{array}{r} 47 \\ -22 \\ \hline 25 \end{array}$ 4) Say: If I have 47 oranges in a basket. If 29 are eaten, how many are left? 5) Write: $\begin{array}{r} 47 \\ -29 \\ \hline \end{array}$ 6) Say: This is harder because 9 is more than 7. Therefore, we borrow from our groups of 10 to make 17 instead of 7. 7) Show learners how to borrow 10 and solve the problem. $\begin{array}{r} 3\cancel{4}7 \\ -29 \\ \hline 18 \end{array}$ 8) Give additional examples. Use sticks to demonstrate if needed.	

PRACTICE  10 minutes	1) Write: Jamila has 50 eggs. She sells 31. How many does she have now? 2) Write: Isah has 45 naira. He buys a pencil with 18 naira. How much money remains? 3) Ask learners to read the questions on the board, then work in small groups to solve the problems.								
WRITE  10 minutes	Write these subtraction problems on the board. Ask learners to copy them in their books and solve them. <table><tr><td>42</td><td>24</td><td>46</td><td>33</td></tr><tr><td><u>-23</u></td><td><u>-15</u></td><td><u>-24</u></td><td><u>-16</u></td></tr></table>	42	24	46	33	<u>-23</u>	<u>-15</u>	<u>-24</u>	<u>-16</u>
42	24	46	33						
<u>-23</u>	<u>-15</u>	<u>-24</u>	<u>-16</u>						
ASSESS  5 minutes	1) Ask learners hold their exercise books in the air to show they have finished. 2) Ask volunteers to write the answers on the board, explaining how they got their answers. 3) Say: When you do you think you could use subtraction in your daily life?								
READ ALOUD  15 minutes	1) Read aloud “Tsohuwa Mai Hikima Da Shashashan Bara,” and ask the comprehension questions. 2) Ask pupils what they heard about subtraction in the story. 3) Ask pupils what they learned today.								

LESSON PLAN 18.1: MATH

TOPIC	Number Sense 1 to 100	
OBJECTIVES	) Learners should be able to identify numbers from 1 to 100) Learners should be able to write the numbers 50-75	
MATERIALS REQUIRED	) Hundreds chart) Flash cards) Sticks in tens and units	
WARM-UP  5 minutes	<u>Wakar Kirge</u> Daya mafarin kirge, Biyu idanun dabba, Uku duwatsun murhu, Hudu kafafun tebur, Biyar na yatsun hannu.	Shida kafafun sauro. Bakwai kwanakin mako. Takwas goma ba biyu kenan. Tara daga ke sai goma. Goma biyar biyu kenan.
LEARN  15 minutes	1) Say: During the previous lessons we learnt numbers up to 50. Today we will learn numbers up to 100. 2) Call ten learners to the front of the room. Ask them each to hold up ten fingers. Then count their fingers to show that there are 100 fingers. 3) Show learners the Hundreds Chart. Point to each number while learners count with you from 50 to 100. 4) Draw a flash card at random between 50 and 100. Ask a volunteer to name the number, then match it to the identical number on the hundreds chart. Repeat with different numbers. 5) Ask a learner to draw a flash card at random, then ask the learner to count the correct number of corresponding sticks (using bundles of 10 plus units). For example, if a learner draws 67, the learner should select 6 bundles of 10 sticks, plus 7 loose sticks. Repeat with different numbers.	

PRACTICE  10 minutes	1) Form groups 3-5 learners. Ask learners to collect 100 of something. For example, they could find 100 stones, 100 leaves, or 100 sticks. 2) If time remains, ask groups to organize their objects into 10 groups of 10.
WRITE  15 minutes	1) Ask learners to write numbers 50-75 in their exercise books. If learners do not finish in the time provided, they may finish as homework.
ASSESS  10 minutes	1) Point to numbers 50-100 on the Hundreds Chart (in order) while learners count. Listen carefully to the learners to hear if they count correctly. 2) Point to a number at random on the Hundreds Chart and ask learners to identify it.
SUMMARIZE  5 minutes	1) Ask learners what they have learned today. 2) Ask learners to finish writing their numbers at home.

LESSON PLAN 18.2: MATH

TOPIC	) Number Sense 1-100	
OBJECTIVES	) Learners should be able to identify numbers from 1 to 100) Learners should be able to write the numbers 76-100	
MATERIALS REQUIRED	) Hundreds Chart) Flash cards from 0-9) Sticks in tens and units, flash cards, 100 square chart	
WARM-UP  5 minutes	<u>Wakar Kirge</u> Daya mafarin kirge, Biya idanun dabba, Uku duwatsun murhu, Hudu kafafun tebur, Biyar na yatsun hannu.	Shida kafafun sauro. Bakwai kwanakin mako. Takwas goma ba biyu kenan. Tara daga ke sai goma. Goma biyar biyu kenan.
LEARN  15 minutes	1) Say: What did we learn yesterday? Today we will keep practicing counting to 100. 2) Say a number and ask learners to count forward until you say "Stop." For example, if you say "43" learners should start counting 43, 44, 45... until you say "stop." Repeat with different numbers. 3) Show learners the Hundreds Chart. Point to each number while learners count with you from 50 up to 100. 4) Point to each number while learners backwards from 100 to 50. 5) Say: I have digits 0 through 9 on these cards. I'll ask volunteers to draw two cards, combine them to make a number. For example, if you draw 7 and 3, the number could be 73. Allow different learners to try drawing cards to make a number. Make sure learners say what number they made.	

PRACTICE  10 minutes	1) Form groups of 3-5 learners. Ask learners to collect 100 of something. For example, they could find 100 stones, 100 leaves, or 100 sticks. 2) If time remains, ask groups to organize their objects into 10 groups of 10.
WRITE  10 minutes	1) Ask learners to write numbers 76-100 in their exercise books. If learners do not finish in the time provided, they may finish as homework.
ASSESS  5 minutes	1) Point to a number at random on the Hundreds Chart and ask learners to identify it.
READ ALOUD  15 minutes	1) Read aloud “Biri Mai Rawa,” and ask the comprehension questions. 2) Ask pupils what they heard about subtraction in the story. 3) Ask pupils what they learned today.

LESSON NUMBER 19.1: PRACTICE AND ASSESSMENT																				
TOPIC	Math assessment																			
OBJECTIVES	10 pupils will take a one-on-one math test - Remaining pupils will complete math problems																			
MATERIALS	1) Paper and pencils for pupils																			
BEFORE CLASS BEGINS	1) Before class, write these math problems on the board: <table><tr><td>$10 + 13 =$</td><td>$24 + 7 =$</td><td>$20 - 7 =$</td><td>$35 - 5 =$</td></tr><tr><td>$\begin{array}{r} 32 \\ +15 \\ \hline \end{array}$</td><td>$\begin{array}{r} 24 \\ +14 \\ \hline \end{array}$</td><td>$\begin{array}{r} 38 \\ + 7 \\ \hline \end{array}$</td><td>$\begin{array}{r} 16 \\ +26 \\ \hline \end{array}$</td></tr><tr><td></td><td>$\begin{array}{r} 44 \\ -23 \\ \hline \end{array}$</td><td>$\begin{array}{r} 24 \\ -12 \\ \hline \end{array}$</td><td>$\begin{array}{r} 46 \\ -27 \\ \hline \end{array}$</td><td>$\begin{array}{r} 23 \\ -16 \\ \hline \end{array}$</td></tr></table> <tr><td>ASSIGN PAIR WORK 10 minutes</td><td> 1) Ask learners to sit in pairs. An advanced learner should sit with a beginning learner. 2) Distribute paper and pencils. Explain that learners should copy and solve each problem on the board. 3) Choose 10 learners at random. Explain that you will call then one by one during the class to take an assessment. </td></tr> <tr><td>ASSESSMENT 45 minutes</td><td> 1) Call the first learner. Sit in a quiet place separate from other learners. 2) Explain to the learner that you will ask a few math questions. 3) Show the learner the numbers and math problems. For numbers, learners should simply name the number in Hausa. For addition and subtraction, the learner should solve each problem. After each task, mark the total correct, making note of difficulties. During the assessment, do not help the learner or give away the answers. You can help the learner in the next lesson. 4) Call the next learner who was selected. Repeat steps 1-3. Continue until you have tested all 10 learners. </td></tr> <tr><td>CLOSING 5 minutes</td><td> 1) Ask learners to hold up their papers to show what they have written. 2) Collect the papers for correction. </td></tr>	$10 + 13 =$	$24 + 7 =$	$20 - 7 =$	$35 - 5 =$	$\begin{array}{r} 32 \\ +15 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ +14 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ +26 \\ \hline \end{array}$		$\begin{array}{r} 44 \\ -23 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ -12 \\ \hline \end{array}$	$\begin{array}{r} 46 \\ -27 \\ \hline \end{array}$	$\begin{array}{r} 23 \\ -16 \\ \hline \end{array}$	ASSIGN PAIR WORK 10 minutes	1) Ask learners to sit in pairs. An advanced learner should sit with a beginning learner. 2) Distribute paper and pencils. Explain that learners should copy and solve each problem on the board. 3) Choose 10 learners at random. Explain that you will call then one by one during the class to take an assessment.	ASSESSMENT 45 minutes	1) Call the first learner. Sit in a quiet place separate from other learners. 2) Explain to the learner that you will ask a few math questions. 3) Show the learner the numbers and math problems. For numbers, learners should simply name the number in Hausa. For addition and subtraction, the learner should solve each problem. After each task, mark the total correct, making note of difficulties. During the assessment, do not help the learner or give away the answers. You can help the learner in the next lesson. 4) Call the next learner who was selected. Repeat steps 1-3. Continue until you have tested all 10 learners.	CLOSING 5 minutes	1) Ask learners to hold up their papers to show what they have written. 2) Collect the papers for correction.
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CLOSING 5 minutes	1) Ask learners to hold up their papers to show what they have written. 2) Collect the papers for correction.																			

8

10

17

45

50

65

74

83

$$8 + 9 =$$

$$12 + 17 =$$

25

+14

28

+16

$$9 - 7 =$$

$$27 - 10 =$$

28

-13

42

-25

Name	Numbers correct	Addition correct	Subtraction correct	Notes
1.	/8	/4	/4	
2.	/8	/4	/4	
3.	/8	/4	/4	
4.	/8	/4	/4	
5.	/8	/4	/4	
6.	/8	/4	/4	
7.	/8	/4	/4	
8.	/8	/4	/4	
9.	/8	/4	/4	
10.	/8	/4	/4	
Observations:				

Teacher signature: _____

Date: _____

LESSON NUMBER 19.2: REVIEW AND REINFORCEMENT

TOPIC	Review
OBJECTIVES	Provide remediation to struggling learners
MATERIALS	
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected assignment from the previous day. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	Conduct review activities with the learners on number recognition, addition and subtraction. Focus on the mathematics skills that learners struggled with in the test. Put learners in small groups so that they can practice the areas that cause them difficulty. Put at least one advanced learner in each group to guide the others.
CLOSING 5 minutes	1) Ask learners if they have questions. 2) Ask learners to continue practicing addition and subtraction problems at home.

LESSON PLAN 20.1: MATH

TOPIC	Addition within 100
OBJECTIVES	) Learners should be able to add within 100 using concrete objects) Learners should be able to use + and = signs correctly
MATERIALS REQUIRED	) Ball of crumpled paper) Flash cards with double digit numbers (34, 52, 67, 21, etc)
WARM-UP  5 minutes	Play the “hot potato” game. Ask learners to stand in a circle and give them paper rolled into a ball. Tell them that it is a hot potato and they should not hold it for long because it will burn them. Starting from 2, any person who catches the ball should add another 2 to the total and throw it to another. Any person that says wrong answer or allows the ball to remain with him longer than 5 seconds is out of the game.
LEARN  15 minutes	1) Say: What is addition? (answer: combining like groups together) Say: How do you think a fruit seller might use addition at the market?Today we will practice addition within 100. 2) Say: You can write the same addition problem two different ways. Write: 25 + 20 = 25 <u>+20</u> Ask a volunteer to solve the problems. 3) Say: It’s easier to do vertical addition because we can align our tens and units. Remember that when our units add up to more than 10, we have to cross over to the tens column. 4) Ask learners to help you solve these problems on the board: 35 <u>+40</u> 47 <u>+22</u> 55 <u>+36</u> 78 <u>+14</u>

PRACTICE  15 minutes	1) Form groups of 3-5 learners. Give each group a pair of cards. Each card should have a different double digit number on it. For example, one card could say 35 and another card could say 42. Ask learners to solve the problem using vertical addition. 2) Ask learners to switch cards with another group and solve the new sum.
WRITE  10 minutes	1) Write these sums on the board. Ask learners to copy them, then write the answer in their exercise book. $\begin{array}{r} 67 \\ +13 \\ \hline \end{array}$ $\begin{array}{r} 82 \\ +13 \\ \hline \end{array}$ $\begin{array}{r} 45 \\ + 46 \\ \hline \end{array}$
ASSESS  10 minutes	1) Ask learners to hold up their exercise books to show the correct answers. 2) Ask learners to compare their answers with a friend, and correct each other's work if necessary. 3) Ask learners to write the correct answers on the board.
SUMMARIZE  5 minutes	Ask the class what they learned today. Ask learners to complete the following at home: $\begin{array}{r} 24 \\ +18 \\ \hline \end{array}$ $\begin{array}{r} 62 \\ + 29 \\ \hline \end{array}$ $\begin{array}{r} 35 \\ + 56 \\ \hline \end{array}$

LESSON PLAN 20.2: MATH

TOPIC	Addition within 100
OBJECTIVES	- Learners should be able to add numbers within 100 using concrete objects crossing the tens - Learners should be able to solve one-step word problems involving addition
MATERIALS REQUIRED	- Crumpled ball of paper - Word problem cards
WARM-UP 5 minutes	Play the “hot potato” game with addition of different numbers (for example, ask learners to add 4 instead of 3 each time they toss the “potato.”).
LEARN  15 minutes	1) Say: Yesterday we learned addition of numbers up to 100. Today we will focus on solving word problems. Make sure you listen carefully so you can solve the problem. 2) Say: There are 44 pupils in primary one and 35 in primary two. How many pupils are there all together? Ask learners to estimate the answer. Then ask a learner to solve the problem on the board. 3) Say: My brother had 32 goats and bought 25 more. How many does he have now? Ask learners to estimate the answer. Then ask a learner to solve the problem on the board. 4) Ask different learners to think of their own word problems. Then ask the class to estimate the answer and solve them on the board.

PRACTICE  10 minutes	1) Form groups of 3-5 learners. Give each group a different word problem on it (these should be prepared before class). Ask learners to write the problem in vertical form and solve. If they finish on time, they can exchange the cards and try another.
WRITE  10 minutes	1) Write the following on the board: Hauwa bought a pen for 35 naira and a book for 47 naira. How much did she spend? 2) Ask learners to solve the problem in their exercise books.
ASSESS  5 minutes	1) Ask some pupils to explain how they got the answers. 2) For homework, ask learners to write a word problem and solve it.
READ ALOUD  15 minutes	1) Read aloud “Tsakanin Goggon Biri Da Sauran Dabbobin Dawa,” and ask the comprehension questions. 2) Ask pupils what they heard about addition in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 21.1: MATH

TOPIC	Subtraction within 100	
OBJECTIVES	) Learners should be able to subtract numbers within 100 using concrete objects) Learners should be able to use - and = signs correctly	
MATERIALS REQUIRED	) Number cards with double digits	
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: What is subtraction? (answer: taking something away) Say: Last week, we talked about how a fruit seller might use addition at the market. How do you think a fruit seller might use subtraction? Today we will practice subtraction within 100. 2) Say: You can write the same addition problem two different ways. Write: $25 - 10 =$ $\begin{array}{r} 25 \\ - 10 \\ \hline \end{array}$ Ask a volunteer to solve the problems. 3) Say: It's easier to do vertical subtraction because we can align our tens and units. Remember that when the bottom unit is larger than the top unit, we must borrow from the tens column. Show learners a quick example: $\begin{array}{r} 21 \\ - 7 \\ \hline \end{array}$ 4) Ask learners to help you solve these problems on the board: $\begin{array}{r} 36 \\ - 12 \\ \hline \end{array} \quad \begin{array}{r} 47 \\ - 22 \\ \hline \end{array} \quad \begin{array}{r} 52 \\ - 33 \\ \hline \end{array} \quad \begin{array}{r} 86 \\ - 27 \\ \hline \end{array}$	

PRACTICE  10 minutes	1) Form groups of 3-5 learners. Give each group a pair of cards. Each card should have a different double digit number on it. For example, one card could say 41 and another card could say 85. Ask learners to create a subtraction problem with the two numbers, then solve it. 2) Ask learners to switch cards with another group and solve the new subtraction problem.
WRITE  15 minutes	1) Write these sums on the board. Ask learners to copy them, then write the answer in their exercise book. $\begin{array}{r} 57 \\ -13 \\ \hline \end{array}$ $\begin{array}{r} 82 \\ -43 \\ \hline \end{array}$ $\begin{array}{r} 47 \\ -39 \\ \hline \end{array}$ $\begin{array}{r} 65 \\ -46 \\ \hline \end{array}$
ASSESS  10 minutes	1) Ask learners to hold up their exercise books to show their answers. 2) Ask learners to compare their answers with a friend, and correct each other's work if necessary. 3) Ask learners to write the correct answers on the board.
SUMMARIZE  5 minutes	Ask the class what they learnt today. Ask learners to complete the following at home: $\begin{array}{r} 34 \\ -18 \\ \hline \end{array}$ $\begin{array}{r} 72 \\ -29 \\ \hline \end{array}$ $\begin{array}{r} 85 \\ -56 \\ \hline \end{array}$

LESSON PLAN 21.2: MATH

TOPIC	Subtraction within 100	
OBJECTIVES	↳ Learners should be able to subtract numbers within hundred involving crossing from tens to units ↳ Learners should be able to solve one step word problem involving subtraction	
MATERIALS REQUIRED	↳ Flash cards	
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Say: Yesterday we learnt subtraction within 100. Today we will focus on solving word problems. Make sure you listen carefully so you can solve the problem. 2) Say: There are 54 learners at school, and 22 go home. How many learners remain? Ask learners to estimate the answer. Then ask a learner to solve the problem on the board. 3) Say: My brother had 32 goats and but sold 15. How many does he have now? Ask learners to estimate the answer. Then ask a learner to solve the problem on the board. 4) Ask different learners to think of their own word problems. Then ask the class to estimate the answer and solve them on the board.	

PRACTICE  10 minutes	1) Form groups of 3-5 learners. Give each group a different word problem on it (these should be prepared before class). Ask learners to write the problem in vertical form. First they should estimate the answer, then solve it. If they finish on time, they can exchange the cards and try another problem.
WRITE  10 minutes	1) Write the following on the board: Amina's chickens laid 44 eggs. Amina sold 25. How many does she have now? 2) Ask learners to solve the problem in their exercise books.
ASSESS  5 minutes	1) Ask some pupils to explain how they got the answers. 2) For homework, ask learners to write a word problem and solve it.
READ ALOUD  15 minutes	1) Read aloud "Asabe Ta Koyi Darasi," and ask the comprehension questions. 2) Ask pupils what they heard about subtraction in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 22.1: MATH

TOPIC	Addition and Subtraction within 100
OBJECTIVES	Learners should be able to solve addition problems within 100 using money and objects
MATERIALS REQUIRED	Inexpensive store items (pencil, soap, kola nut, candy). Paper and pens to make price tags
WARM-UP  5 minutes	Ask learners to count backward from 100 until you say “Stop.” Choose other starting points (for example, 55 or 32). Ask learners to count backwards until you say “Stop.”
LEARN  15 minutes	1) Say: We have been learning about addition and subtraction. Can you give examples of how we use addition and subtraction in daily life? Say: Today we will talk about addition at the market. We are going to use an imaginary store to practice addition. 2) Display 5 different items (for example, a pencil, a pen, exercise book, soap, kola nut). Display a price tag for each item that is 50 naira or less. 3) Call a learner to the front. Explain that the learner should choose any two items. The learner should estimate the total cost of the two items, then confirm the estimate by writing the sum on the board. 4) Call another learner to the front. Ask the learner to choose three items from the store. The learners should estimate the total cost, then confirm by writing the sum on the board. 5) Continue with different learners.

PRACTICE  20 minutes	1) Put learners in small groups. Explain that they are in a store and one learner per group is the vendor. Give each vendor 5 objects and ask the vendor to put a price on each item (50 naira or less). 2) Each learner in the small group should choose two items from the store, then add them to find the total cost. 3) Tell learners in each group that they have only 70 Naira to spend. Ask learners to find what combinations of items they can buy.
WRITE  10 minutes	Say: I will say a word problem. You should write down the sum. Musa buys a pencil for 10 naira, an exercise book for 35 naira, and an eraser for 20 naira. How much does he spend altogether?
ASSESS  5 minutes	1) Ask learners to hold up their exercise books to show they have added $10 + 35 + 20$. Then ask a learner to solve it on the board. 2) Ask “How much” problems. For example, say: If I spend 50 naira on rice and 30 naira on fruit, how much do I spend?
SUMMARIZE  5 minutes	1) Ask learners what they learnt today. 2) Ask learners to practice adding costs with a family member or friend.

LESSON PLAN 22.2: MATH

TOPIC	Subtraction within 100
OBJECTIVES	Learners should be able to make change using subtraction
MATERIALS REQUIRED	- Inexpensive store items (pencil, soap, kola nut, etc). - Naira notes (fake or real) - Paper and pens to make price tags
WARM-UP 5 minutes	1) Ask the pupils to count in fives up to 100. If available, show 5 naira notes while you count.
LEARN  15 minutes	1) Say: In the last lesson, we learnt about adding prices. Today we are going to talk about making change. Where have you seen people make change? Say: We use subtraction to make change. 2) Display 5 different items (for example, a pencil, a pen, exercise book, soap, kola nut). Display a price tag for each item that is 20 naira or less. 3) Give a learner a 100 note (real or fake). Explain that the learner should choose any two items and add the cost together. 4) Say: If the learner pays with a 100 naira note, how much change does he get? After the class responds, give the learner his change. 5) Write the subtraction sum on the board to confirm the learners' response. 6) Repeat steps 3-5 with different learners.

PRACTICE  15 minutes	1) Put learners in small groups and explain that they are in a store. One learner per group is the vendor. Give each vendor 5 objects and ask the vendor to put a price on each item (50 naira or less). 2) Explain that all other learners in the group have 100 Naira to spend. Each learner should buy 2 items from the store, and the vendor should give proper change. 3) If time remains, ask learners to take turns being the vendor.
WRITE  15 minutes	Say: I will say a word problem. You should write down the subtraction problem and solve it. Musa has 100 Naira. He spends 75 Naira on school supplies. How much change does he receive?
ASSESS  5 minutes	1) Ask learners to hold up their exercise books to show they have subtracted $100 - 75 = 25$. 2) Ask “How much” problems. For example, say: If I buy kola nuts for 30 naira and pay with a 50 naira note, how much change do I receive?
READ ALOUD  15 minutes	1) Read aloud “Tsaron Shago Dabo,” and ask the comprehension questions. 2) Ask pupils what they heard about money in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 23.1: MATH

TOPIC	Units of length												
OBJECTIVES	Learners should be able to use nonstandard units of length												
MATERIALS REQUIRED	Assorted objects for measurement (pencils, sticks rope, etc)												
WARM-UP  5 minutes	1) Show ten objects to the class (for example, a pencil, book, rope, leaf, etc). Ask learners to order them from longest to shortest. 2) Say: Who is the tallest in the class? Who is the shortest? How can we find out? Ask learners to guess who is the tallest, then line children up to find out.												
LEARN  15 minutes	1) Say: Today we will talk about length. We can measure length in different ways. For example, we can measure length using our arms. How many arm lengths is the blackboard? Allow learners to guess, then measure with your arm to find the answer. 2) Say: If we call a learner to measure instead of the teacher, how many arm lengths is the blackboard? Call two different learners to measure. 3) Say: Instead of measuring with our arms, we can also measure with our hands. How many hand lengths is the blackboard? Call two different learners to measure it. 4) Ask learners to help you fill out the chart according to what you found. <table><tr><td>Name</td><td>Teacher</td><td>Learner A</td><td>Learner B</td></tr><tr><td>Hand span</td><td></td><td></td><td></td></tr><tr><td>Arm</td><td></td><td></td><td></td></tr></table>	Name	Teacher	Learner A	Learner B	Hand span				Arm			
Name	Teacher	Learner A	Learner B										
Hand span													
Arm													

PRACTICE  20 minutes	1. Ask learners to copy the following chart into their exercise books. <table><tr><td>Unit of measure</td><td>Learner A</td><td>Learner B</td></tr><tr><td>Stride</td><td></td><td></td></tr><tr><td>Feet</td><td></td><td></td></tr></table> 2. Tell learners to work in pairs. Each learner should measure the same distance (for example, the length of the classroom). First they should measure with their full stride, then with the length of their feet. They should copy their findings on their chart. 3. Ask learners to report to the class what measurements they got. Ask learners why their measurements may be different.	Unit of measure	Learner A	Learner B	Stride			Feet		
Unit of measure	Learner A	Learner B								
Stride										
Feet										
Write	1) Ask learners to make a drawing of different objects that add to the same length. For example, they could draw pictures of hands lined up next to a person.									
ASSESS  10 minutes	1) What other objects could I use to measure length? For example, pencils, rope, finger length, etc. 2) Ask different learners to show you how to measure classroom items with these objects.									
SUMMARIZE  5 minutes	1) Ask the pupils what they have learnt today. 2) Tell them to measure some objects at home with feet, arm, hand span.									

LESSON PLAN 23.2: MATH

TOPIC	Measurement of length
OBJECTIVES	- Learners should be able to measure different object in meters and centimeters - Learners should be able to estimate length and measure
MATERIALS REQUIRED	- Meter stick - Meter sticks (real or made out of paper) for the learners.
WARM-UP  5 minutes	Tell the class this story: One day Hassan and Hadiza were arguing about the size of their classroom. Hassan, who was 15 years old, said he could walk across the classroom in 10 large steps. Hadiza, who is 8 years old, said she could walk across the classroom in 20 steps. Why do you think they had different measurements?
LEARN  20 minutes	1) Say: Yesterday we learnt nonstandard measurements, like hands and feet. What is difficult about this kind of measurement? 2) Say: Nonstandard measurements give us different measurements. Standard measurements all give us the same answer. One common standard measurement is called “meter.” 3) Show learners how to measure the blackboard (or another short distance) with a meter stick. Then ask learners to try measuring with the meter stick.
PRACTICE  10 minutes	1) Go outside with the learners. Ask learners to form small groups. 2) Provide each group with a meter stick. (If meter sticks are not available, you can draw a line in the sand the length of a meter. You can also give them meter sticks made out of paper). 3) Ask learners to find objects that are the length of one meter. They can line up multiple objects end-to-end if they wish (for example six books may be as long as one meter).

WRITE  10 minutes	1) Ask learners to write a list of the items they found that were one meter. For example: 6 books: 1 meter 15 pencils: 1 meter 21 leaves: 1 meter
ASSESS  5 minutes	1) Ask learners to estimate how many meters long the class is, and how many meters tall the teacher is. 2) Ask learners to confirm their estimates using the meter stick.
READ ALOUD  15 minutes	1) Read aloud “Labarin ‘Yar Sarki Da Masunta,” and ask the comprehension questions. 2) Ask pupils what they heard about measurement in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 24.1: MATH

TOPIC	Measurement
OBJECTIVES	) Learners should be able to measure using centimeters) Learners should be able to convert from one unit to another
MATERIALS REQUIRED	) Meter rule) Classroom objects (pencil, book, paper, etc)) Strips of paper 10 centimeters in length, with centimeters marked
WARM-UP  5 minutes	Say: We are going to play a game called Greater Than or Less Than. I will say an object, and you tell me if it is greater than or less than a meter. (Examples: horse, fish, car, bicycle, book, hand, pencil).
LEARN  15 minutes	1) Say: Yesterday we learnt about meters. Do you think that everything can be easily measured with a meter stick? Say: Some measurements are too far to be easily measured with a meter stick. For example, the distance from here to Abuja should be measured in larger units. We measure this distance in kilometers. One kilometer is 1,000 meters. Say: Other items are too short to be measured with a meter stick. Therefore, we need smaller units. These smaller units are called centimeters. Every meter stick is divided into 100 centimeters. 2) Trace the meter stick on the board. Then ask learners to count aloud with you as you make 100 tick marks for the centimeters. Make sure to make a longer tick mark at 10, 20, 30, 40, etc. 3) Ask volunteers to choose an object from the classroom (pencil, cap, finger, etc) and guess how many centimeters their object is. They should confirm their guess by measuring on the blackboard. 4) Say: Let's review. How many centimeters are in one meter?

	Say: Imagine you are a tailor. Do you think that understanding centimeters could help you do your work? How?
PRACTICE  10 minutes	1) Put learners in small groups. Give each group a measuring stick that is 10 centimeters long. 2) Ask learners to find 5 objects to measure against their centimeter stick. Then ask them to order their objects from longest to shortest.
WRITE  15 minutes	1) Ask learners to draw a fish (or another animal or object) that is 5 centimeters long. Then they should check their drawing with measuring stick.
ASSESS  10 minutes	1) Call 5 learners to the front of the room. Ask each learner to draw a line of a different length. 2) Ask learners to estimate how long each line is in centimeters. Then ask volunteers to measure them.
SUMMARIZE  5 minutes	1) Ask learners what they learnt today. 2) Ask learners how many centimeters are in a meter.

LESSON PLAN 24.2: MATH

TOPIC	) Conversion of units
OBJECTIVES	) Learners should be able to convert from centimeter to meter and vice versa.
MATERIALS REQUIRED	) Rulers and meter sticks
WARM-UP 5 minutes	Say: We are going to play a game called Greater Than or Less Than. I will say an object, and you tell me if it is greater than or less than a meter. Example objects: horse, fish, car, bicycle, book, hand, pencil.
LEARN  15 minutes	1) Say: What did we measure during the last lesson? 2) Say: Some lengths require us to use both meters and centimeters. For example, a length might be more than one meter but less than two meters. 3) Draw a line on the board that is approximately one and a half meters. Ask learners to estimate the length. Then show learners how you find the measurement with a meter stick (for example, 1 meter and 30 centimeters). 4) Draw additional lines on the board that are over one meter long. Ask learners to estimate the length, and then measure. 5) Ask for a learner to come to the front of the room. Ask the class to guess his height. Then measure to confirm the meters and centimeters. If time remains, more learners can volunteer to be measured.

PRACTICE  10 minutes	1) Go outside with learners. Put learners in small groups. Ask each group to draw a line on the ground that is more than one meter but less than two. They should estimate the length, then measure it to check. Groups can take turns using the meter stick.
WRITE  10 minutes	1) Write the following list of centimeters. Ask learners to convert to meters and centimeters: 135 centimeters = 1 meter 35 centimeters 147 centimeters = 261 centimeters = 588 centimeters =
ASSESS  5 minutes	Say: How many centimeters in a meter? Say: Name an object that is less than ten centimeters. Name an object that is more than ten centimeters. Name an object that is more than a meter.
READ ALOUD  15 minutes	1) Read aloud “Labarin ‘Yar Sarki Da Masunta,” and ask the comprehension questions. 2) Ask pupils what they heard about measurement in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 25.1: MATH

TOPIC	Revision of addition						
OBJECTIVES	- Identify areas where learners are struggling in addition - Give learners additional practice in addition						
MATERIALS	Sticks in bundles and units						
WARM-UP  5 minutes	Ask learners to count forward and backward, starting at different points. For example, if you say “forward from 25” they count “25, 26, 27, etc.” If you say “backward from 50” they say “50, 49, 48, 47, etc.”						
LEARN  15 minutes	1) Say: What have we learnt in math in the last few weeks? Say: Today we are going to review what we have learnt. Who can tell us what addition means? (Answer: putting two or more groups of similar objects together). 2) Say: Imagine that there are 25 people at a naming ceremony, and 16 more arrive. Can you estimate many are there in all? 3) After learners estimate an answer, ask for a volunteer to demonstrate the problem with bundles of sticks. 4) Ask for a volunteer to solve the problem on the board, using tens and units columns: <table> <tr> <td>T</td> <td>U</td> </tr> <tr> <td>2</td> <td>5</td> </tr> <tr> <td>+1</td> <td>6</td> </tr> </table> 5) Ask a learner to come up with their own story problem, then solve it on the board.	T	U	2	5	+1	6
T	U						
2	5						
+1	6						

PRACTICE  15 minutes	1) Ask learners to solve the following in pairs. Circulate to assist struggling learners. 29 36 56 27 32 <u>42</u> <u>48</u> <u>44</u> 14 41 <u>36</u> <u>18</u>
WRITE  10 minutes	Say: Write the sum for this word problem. Hajiya makes 55 masa for primary 1 and 37 for primary 2. How many masa does she make in all?
ASSESS  10 minutes	Check learners’ notebooks for both pair work and the writing exercises. Ask learners to write the correct answers on the board.
SUMMARIZE  5 minutes	1) Ask the class what they learnt today. 2) Give learners the following exercises to try at home. 25 + 16 = 45 + 29 = 34 + 9 + 43 =

LESSON PLAN 25.2: MATH

TOPIC	Revision of subtraction
OBJECTIVES	- Identify areas where learners are struggling in subtraction - Give learners additional practice in subtraction
MATERIALS REQUIRED	Sticks in tens and bundles
WARM-UP  5 minutes	Ask learners to count forward and backward in twos, starting at different points. For example, if you say “Forward from 8, learners should say 8, 10, 12, 14, etc.”
LEARN  15 minutes	1) Say: What did we practice in our last class? Say: Today we are going to review subtraction. Who can tell us what subtraction means? (Answer: taking something away from a group). 2) Say: Imagine that there are 58 people at a naming ceremony. Then 19 people leave. Can you estimate many people are left? 3) After learners estimate an answer, ask for a volunteer to demonstrate the problem with bundles of sticks. 4) Ask for a volunteer to solve the problem on the board, using tens and units columns: T U 5 8 <u>-1 9</u> 5) Ask a learner to come up with their own story problem, then solve it on the board.

PRACTICE  10 minutes	1) Ask learners to solve the following in pairs. Circulate to assist struggling learners. $\begin{array}{r} 49 \\ -22 \\ \hline \end{array}$ $\begin{array}{r} 36 \\ -18 \\ \hline \end{array}$ $\begin{array}{r} 76 \\ -36 \\ \hline \end{array}$ $\begin{array}{r} 84 \\ -56 \\ \hline \end{array}$ $\begin{array}{r} 41 \\ -15 \\ \hline \end{array}$
WRITE  10 minutes	Say: Write the sum for this word problem. Hajiya makes 55 masa, and her family eats 37. How many masa are left?
ASSESS  5 minutes	Circulate to check learners' notebooks. Ask learners to write the correct answer on the board.
READ ALOUD  15 minutes	1) Read aloud "Asabe Ta Koyi Darasi," and ask the comprehension questions. 2) Ask pupils what they heard about subtraction in the story. 3) Ask pupils what they learnt today.

LESSON NUMBER 26.1: ASSESSMENT	
TOPIC	Math assessment
OBJECTIVES	Learners will take a math assessment
MATERIALS	Paper and pencils for pupils
INTRODUCTION	1) Explain to learners that they will take an exam. This exam will show what they have learnt. First, they should write their name on the top of a blank piece of paper.
ADDITION WITHIN 100	Tell learners to copy the problems from the board and solve them. 1) 18 +17 2) 23 +16 3) 63 +24 4) 34 45 +17 5) There are 27 boys and 38 girls in a class. How many pupils are there in all?
SUBTRACTION WITH 100	1) 47 -28 2) 32 -15 3) 77 -35 4) 61 -39 5) There are 45 people in a school. If 20 are boys, how many girls are on the bus? 6) Salim has a 100 naira note. If he bought a pen for 25 naira and a sweet for 20 naira, how much is his change?

LESSON NUMBER 26.2: REVIEW AND REINFORCEMENT

TOPIC	Review
OBJECTIVES	1) Assist struggling learners in area of difficulty
MATERIALS	
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected test from the previous day. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	Conduct review activities with the learners on addition and subtraction. Focus on the mathematics skills that learners struggled with in the test. Put learners in small groups so that they can practice the areas that cause them difficulty. Put at least one advanced learner in each group to guide the others.
CLOSING 5 minutes	1) Ask learners if they have questions. 2) Ask learners to continue practicing addition and subtraction problems at home.

LESSON PLAN 27.1: MATH	
TOPIC	Repeated addition
OBJECTIVES	Learners will be able to solve repeated addition problems
MATERIALS	Ball of crumpled paper Stones, leaves, and other small objects Paper and pencils for the learners
WARM-UP 10 minutes	Play the “hot potato” game. Ask learners to stand in a circle. Give them paper rolled into a ball. Starting from 2, any person who catches the ball should add another 2 to the total and throw it to another person.
LEARN 10 minutes	1) Say: In our math lessons, we learnt how to add up quantities. Today we will practice addition of equal groups. 2) Call six learners to the front of the classroom. Ask them to stand in pairs. 3) Say: We can see 2 learners in each group. There are 3 groups, so we will add: $2 + 2 + 2 = 6$. We can also say that three groups of two equals six. Write: $2 + 2 + 2 = 6$ 4) Draw two groups of four chairs. $\begin{array}{cccc} \text{h} & \text{h} & \text{h} & \text{h} \end{array} + \begin{array}{cccc} \text{h} & \text{h} & \text{h} & \text{h} \end{array}$ Say: We can see 4 chairs in each group, so we add $4 + 4 = 8$. We can also say that two groups of four equals 8. 5) $\begin{array}{cccc} \text{h} & \text{h} & \text{h} & \text{h} \end{array} + \begin{array}{cccc} \text{h} & \text{h} & \text{h} & \text{h} \end{array} = \begin{array}{cccc} \text{h} & \text{h} & \text{h} & \text{h} \\ \text{h} & \text{h} & \text{h} & \text{h} \end{array}$ Write: $4 + 4 = 8$

) Repeated addition

Learners will be able to solve repeated addition problems

- 1) Ball of crumpled paper
- 2) Stones, leaves, and other small objects
- 3) Paper and pencils for the learners

Play the “hot potato” game. Ask learners to stand in a circle. Give them paper rolled into a ball. Starting from 2, any person who catches the ball should add another 2 to the total and throw it to another person.



The picture isn't as bleak

10 minutes

2) Call six learners to the front of the classroom. Ask them to stand in pairs.

3) Say: **We can see 2 learners in each group. There are 3 groups, so we will add: $2 + 2 + 2 = 6$. We can also say that three groups of two equals six.**

Write: $2 + 2 + 2 = 6$

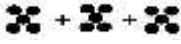
4) Draw two groups of four chairs.

h h h h + h h h h

Say: **We can see 4 chairs in each group, so we add $4 + 4 = 8$. We can also say that two groups of four equals 8.**

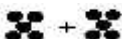
5) $\begin{array}{r} \text{h h h h} \\ + \text{h h h h} \\ \hline \text{h h h h} \\ \text{h h h h} \end{array}$

Write: $4 + 4 = 8$

	6) Ask learners to find objects in the environment to create other repeated addition problems (for example, 3 groups of 4 pencils).
PRACTICE  15 minutes	1) Form groups of 3-5 learners and give each group a set of stones. 2) Ask learners to make four groups of 2 with the stones. Walk around to make sure they make correct groupings. 3) Ask the learners how many stones are in each group. Then ask how many groups of stones there are. 4) Ask the learners to add up the total number of stones: Write: $2 + 2 + 2 + 2 = 8$ 5) Repeat the process with different quantities (3 groups of 5 stones, 2 groups of 6 stones, etc).
WRITE  10 minutes	1) Draw the following on the board. Ask learners to write a repeated addition equation for each.  
ASSESS 10 minutes	Ask learners to check their answers with a friend. Then ask a learner to write the equations on the board. $3 + 3 + 3 + 3 =$ $5 + 5 + 5 =$
SUMMARIZE 5 minutes	1) Ask learners what they learned today. 2) Say: Today we learned about repeated addition. Repeated addition is when you add the same group of numbers again and again. 3) Ask learners to copy the following and solve them at home: $4 + 4 + 4 =$ $1 + 1 + 1 + 1 + 1 =$ $3 + 3 + 3 =$ $5 + 5 + 5 + 5 =$

LESSON PLAN 27.2: MATH

TOPIC	Multiplication
OBJECTIVES	Learners will be able to: Recognize and use multiplication symbol (x) Multiply numbers between 1 and 5
MATERIALS REQUIRED	Paper cut outs, stones, leaves, and other small objects Paper and pencils for the learners
WARM-UP 5 minutes	Play the “hot potato” game. Ask learners to stand in a circle. Give them paper rolled into a ball. Starting from 3, any person who catches the ball should add another 3 to the total and throw it to another person.
LEARN 15 minutes	1) Say: Last class we learnt about repeated addition. Today we will learn about a shorter way to add the same quantity. 2) Draw two groups of four chairs. h h h h + h h h h Say: We can see 4 chairs in each group. There are 2 groups, so we will add: $4 + 4 = 8$. We can also say that two groups of four equals 8. 3) $h h h h + h h h h = \begin{matrix} h h h h \\ h h h h \end{matrix}$ Write: $4 + 4 = 8$ $2 \times 4 = 8$ 4) Say: In this problem, the “x” means “times” or “groups of.” In other words, we see that two groups of four equals 8. 5) Continue practicing examples of repeated addition and multiplication. In each instance, draw the image on the

	board, write the repeated addition equation, and write the multiplication equation.
PRACTICE  10 minutes	1) Form groups of 3-5 learners and give each group a set of stones. 2) Ask learners to make 3 groups with 2 stones in each group. Walk around to make sure they make correct groupings. 3) Ask the learners how many stones are in each group. Then ask learners for the total. 4) Write: $2 + 2 + 2 = 6$ $2 \times 3 = 6$ 5) Repeat the process with different quantities (3 groups of 5 stones, 2 groups of 4 stones, etc).
WRITE  15 minutes	1) Draw the following on the board. Ask learners to write a repeated addition equation and a multiplication equation for each:   
ASSESS  10 minutes	Ask learners to check their answers with a friend. Then ask a learner to write the equations on the board. $3 + 3 + 3 =$ $3 \times 2 =$ $5 + 5 =$ $5 \times 2 =$ $4 + 4 + 4 =$ $4 \times 3 =$
Read aloud  5 minutes	1) Read aloud “Gizo Mai Kafafu Da Yawa” and ask the comprehension questions. 2) Ask pupils what they heard about multiplication in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 28.1: MATH

TOPIC	) Multiplication
OBJECTIVES	) Learners will be able to multiply numbers with results not exceeding 24
MATERIALS REQUIRED	) Stones, leaves, and other small objects) Paper with multiplication problems written on them) Paper and pencils for the learners
WARM-UP 10 minutes	<u>Wakar Rubanyawa (1)</u> Daya sau daya – Daya, Daya sau biyu – Biyu, Daya sau uku – Uku, Daya sau hudu – Hudu, Daya sau biyar – Biyar
LEARN  10 minutes	1) Say: In our previous lesson, we learnt that multiplication is a simple way of calculating the sum of equal groups, such as $2 + 2 + 2$ 2) Draw:  Say: How many huts are in each group? How many groups are there? 3) Call a learner to the board to represent the problem with repeated addition. They should write: $3 + 3 + 3 + 3 + 3 = 15$ 4) Ask learners if there is a shorter way to write this equation. Then call a learner to write the problem as a multiplication problem. They should write: $3 \times 5 = 15$ 5) Write: $6+6+6+6$, then ask a learner to write it as a multiplication problem.

	6) Repeat the process using other numbers.										
PRACTICE  10 minutes	1) Form groups of 3-5 learners. Make sure there is one advanced learner in each group. Give each group a set of stones. 2) Distribute pieces of paper that contain different multiplication problems that connect multiplication to real life (For example: A farmer has 2 rows of beanstalks, with 5 beanstalks in each row. How many beanstalks does he have altogether)? Learners should represent the problem using stones, and then solve it symbolically. 3) After learners finish, they should exchange papers and solve the new problem.										
WRITE  10 minutes	1) Ask learners to copy these problems and solve them. <table> <tr> <td>$2 \times 1 =$</td><td>$2 \times 6 =$</td></tr> <tr> <td>$2 \times 2 =$</td><td>$2 \times 7 =$</td></tr> <tr> <td>$2 \times 3 =$</td><td>$2 \times 8 =$</td></tr> <tr> <td>$2 \times 4 =$</td><td>$2 \times 9 =$</td></tr> <tr> <td>$2 \times 5 =$</td><td>$2 \times 10 =$</td></tr> </table>	$2 \times 1 =$	$2 \times 6 =$	$2 \times 2 =$	$2 \times 7 =$	$2 \times 3 =$	$2 \times 8 =$	$2 \times 4 =$	$2 \times 9 =$	$2 \times 5 =$	$2 \times 10 =$
$2 \times 1 =$	$2 \times 6 =$										
$2 \times 2 =$	$2 \times 7 =$										
$2 \times 3 =$	$2 \times 8 =$										
$2 \times 4 =$	$2 \times 9 =$										
$2 \times 5 =$	$2 \times 10 =$										
ASSESS  15 minutes	1) Ask learners to hold up their notebooks to show their answers. 2) Ask learners to sit in pairs and quiz each other on their “times 2” multiplication facts. If learners finish, they can move to more difficult multiplication facts. Circulate to listen and assist learners.										
SUMMARIZE 	1) Say: Today we practiced multiplication. It helps to practice and memorize our multiplication facts so that we can quickly find the answer in the future.										

5 minutes	2) Ask learners to complete the following problems for homework: $3 \times 1 =$ $3 \times 2 =$ $3 \times 3 =$ $3 \times 4 =$ $3 \times 5 =$ $3 \times 6 =$ $3 \times 7 =$ $3 \times 8 =$ $3 \times 9 =$ $3 \times 10 =$
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LESSON PLAN 28.2: MATH

TOPIC	) Multiplication
OBJECTIVES	Learners will be able to:) Multiply between numbers 1 and 9
MATERIALS REQUIRED	) Stones, leaves, and other small objects) Paper and pencils for the learners
WARM-UP 5 minutes	<u>Wakar Rubanyawa (2)</u> Biyu sau daya – Biyu, Biyu sau biyu - Huđu, Biyu sau uku – Shida, Biyu sau huđu – Takwas, Biyu sau biyar – Goma
LEARN  15 minutes	1) Say: Today we are going to continue practicing multiplication, but with higher numbers. First, let's review with lower numbers. If I have 3 groups of learners, with 5 learners in each group, how many learners do I have altogether? Are you ready to move onto higher numbers? 2) Ask 21 learners to come the front of the room and stand in groups of 3. Ask learners how many total groups there are (they should say 7). Write: $7 \times 3 = 21$ 3) Ask the 21 learners to stand in groups of 7. Then ask how many groups there are (they should say 3). Write $3 \times 7 = 21$ Say: What do you notice about these two equations?

	When we multiply, we can write our numbers in either order. Changing the order means we rearrange the groups, but it does not change the total. 4) Repeat the process again, using different numbers (for example, ask for 30 learners to make 6 groups).										
PRACTICE  10 minutes	1) Form groups of 3-5 learners. Make sure there is one advanced learner in each group. Give each group a set of stones. 2) Distribute pieces of paper that each contain a different multiplication problem. Ask learners to represent the problem with stones, then solve it. For example, if learners receive a paper that says 7×4, they should make seven groups of four (or four groups of seven) and write $4 \times 7 = 28$. 3) Ask groups to exchange papers and do the new problem.										
WRITE  10 minutes	1) Ask learners to copy these problems and solve them. <table><tr><td>$4 \times 1 =$</td><td>$4 \times 6 =$</td></tr><tr><td>$4 \times 2 =$</td><td>$4 \times 7 =$</td></tr><tr><td>$4 \times 3 =$</td><td>$4 \times 8 =$</td></tr><tr><td>$4 \times 4 =$</td><td>$4 \times 9 =$</td></tr><tr><td>$4 \times 5 =$</td><td>$4 \times 10 =$</td></tr></table>	$4 \times 1 =$	$4 \times 6 =$	$4 \times 2 =$	$4 \times 7 =$	$4 \times 3 =$	$4 \times 8 =$	$4 \times 4 =$	$4 \times 9 =$	$4 \times 5 =$	$4 \times 10 =$
$4 \times 1 =$	$4 \times 6 =$										
$4 \times 2 =$	$4 \times 7 =$										
$4 \times 3 =$	$4 \times 8 =$										
$4 \times 4 =$	$4 \times 9 =$										
$4 \times 5 =$	$4 \times 10 =$										
ASSESS  10 minutes	1) Ask learners to hold up their notebooks to show their answers. 2) Ask learners to sit in pairs and quiz each other on their “times 4” multiplication facts. Circulate to listen and assist learners.										

SUMMARIZE



10 minutes

1) Say: Today we practiced multiplication. It helps to practice and memorize our multiplication facts so that we can quickly find the answer in the future.

2) Ask learners to complete the following problems for homework:

$5 \times 1 =$

$5 \times 6 =$

$10 \times 1 =$

$10 \times 6 =$

$5 \times 2 =$

$5 \times 7 =$

$10 \times 2 =$

$10 \times 7 =$

$5 \times 3 =$

$5 \times 8 =$

$10 \times 3 =$

$10 \times 8 =$

$5 \times 4 =$

$5 \times 9 =$

$10 \times 4 =$

$10 \times 9 =$

$5 \times 5 =$

$5 \times 10 =$

$10 \times 5 =$

$10 \times 10 =$

LESSON PLAN 29.1: MATH

TOPIC	Division
OBJECTIVES	) Learners will be able to divide piles of objects not exceeding 12 into equal groups) Learners should recognize and use division symbol
MATERIALS REQUIRED	) Stones, leaves, and other small objects) Paper and pencils for the learners
WARM-UP 5 minutes	Say:) How do you and your siblings share money?) How do students share food?) How do you share responsibilities?) Are there other ways that we share in life?
LEARN  15 minutes	1) Say: Today we will talk about the concept of sharing in mathematics. 2) Show a pile of 10 stones to the learners. Count the stones to confirm you have 10. Then call 5 learners to the front. Ask them to try to share the stones equally among themselves. Then ask how many they each have (they should have 2). 3) Say: Sharing in mathematics is called division. We divide a quantity into equal groups. In this case, if we divide 10 into 5 equal groups, we get 2 in each group. We use a division sign to indicate this. Write: $10 \div 5 = 2$ 4) Show 12 stones to the learners. Call 3 learners to the front and ask them to share the stones equally. Then write the division problem on the board.

	5) Ask different numbers of learners to divide the 12 stones (6 learners, 4 learners, 2 learners, 1 learner, etc). Write each division equation.
PRACTICE 10 minutes	1) Form small groups of learners. Make sure there is one advanced learner in each group. 2) Give each group 12 stones and ask them to count to confirm how many there are. 3) Ask learners to make 3 equal groups from the stones, then write the equation. 4) Repeat with different numbers. Circulate to help learners.
WRITE 15 minutes	Ask learners to copy the following division problems, then solve them. 12 ÷ 3 = 10 ÷ 5 = 6 ÷ 3 = 12 ÷ 2 = 10 ÷ 2 = 6 ÷ 2 = 12 ÷ 4 = 10 ÷ 1 =
ASSESS  10 minutes	1) Ask learners to hold up their notebooks to show their completed work. 2) Ask different learners to write the correct answer on the board. After each learner writes the correct answer, they should demonstrate the division problem with manipulatives.
SUMMARIZE  5 minutes	1) Remind the learners that we use division to share things among ourselves, including food, money and other items. 2) Ask learners to solve the following exercises at home: 8 ÷ 2 = 14 ÷ 7 = 15 ÷ 3 = 16 ÷ 4 = 9 ÷ 3 = 12 ÷ 6 = 4 ÷ 2 = 16 ÷ 2 =

LESSON PLAN 29.2: MATH

TOPIC	) Division
OBJECTIVES	) Learners will be able to divide piles of objects not exceeding 12 into equal groups) Learners should recognize and use division symbol
MATERIALS REQUIRED	) Stones, leaves, sticks, or other small objects) Paper and pencils for the learners) Markers and flip charts
WARM-UP  5 minutes	Ask learners to form a circle. Ask a simple division question (for example, I have 6 oranges and share them among 2 people. How many do I give to each person?). Throw a ball to a learner to answer the question. Then ask a new question and throw a ball to a different person.
LEARN  15 minutes	1) Say: Last class we talked about division. Who remembers what we mean by division? Division means sharing things in equal groups. What is an example of something we might share equally? Remember that division is the opposite of multiplication. 2) Show a pile of 18 stones to the learners. Count the stones to confirm you have 18. Then call 3 learners to the front. Ask them to try to share the stones equally among themselves. Then ask how many they each have (6). 3) Say: If we divide 18 into 3 equal groups, we get 6 in each group. We use a division sign to indicate this. Write: $18 \div 3 = 6$ 4) Repeat steps 2 and 3 with different numbers of stones and learners (for example, 18 stones and 2 learners; 20 stones and 4 learners; etc)

PRACTICE  10 minutes	1) Form small groups of learners. Make sure there is one advanced learner in each group. 2) Give each group 24 stones and ask them to count to confirm how many there are. 3) Ask learners to make 6 equal groups from the stones, then write the equation. 4) Repeat with different numbers. Circulate to help learners.									
WRITE  10 minutes	Ask learners to copy the following division problems, then solve them. <table><tr><td>$24 \div 6 =$</td><td>$20 \div 5 =$</td><td>$16 \div 8 =$</td></tr><tr><td>$24 \div 3 =$</td><td>$20 \div 2 =$</td><td>$16 \div 4 =$</td></tr><tr><td>$24 \div 2 =$</td><td>$20 \div 4 =$</td><td></td></tr></table>	$24 \div 6 =$	$20 \div 5 =$	$16 \div 8 =$	$24 \div 3 =$	$20 \div 2 =$	$16 \div 4 =$	$24 \div 2 =$	$20 \div 4 =$	
$24 \div 6 =$	$20 \div 5 =$	$16 \div 8 =$								
$24 \div 3 =$	$20 \div 2 =$	$16 \div 4 =$								
$24 \div 2 =$	$20 \div 4 =$									
ASSESS  5 minutes	1) Ask learners to hold up their notebooks to show their completed work. 2) Ask different learners to write the correct answer on the board.									
READ ALOUD  15 minutes	1) Read aloud “Shiga Motar Tunkiya da Kare da Akuya” and ask the comprehension questions. 2) Ask pupils what they heard about division in the story. 3) Ask pupils what they learnt today.									

LESSON PLAN 30.1: MATH

TOPIC	) Multiplication
OBJECTIVES	) Learners will be able to solve one-step word problems involving multiplication) Learners will learn a strategy for solving problems
MATERIALS REQUIRED	) Paper and pencils for the learners) Markers, cardboards and flip charts) Multiplication stories to distribute to groups
WARM-UP  5 minutes	<u>Wakar Rubanyawa (2)</u> Biyu sau daya – Biyu, Biyu sau biyu - Huđu, Biyu sau uku – Shida, Biyu sau huđu – Takwas, Biyu sau biyar – Goma
LEARN  15 minutes	1) Say: We have now learnt about multiplication and division. Today we will practice using multiplication in real life situations. 2) Say: When we hear a problem, there are three steps to solving it. First, we need to understand it. Second, we need to make a plan. Third, we need to act on our plan. Say: Here is an example. One pencil costs ₦15. What is the cost of three pencils? Say: First, let's understand the problem. What are we trying to find? (Answer: the cost of three pencils). Second, let's make a plan. How could we solve this problem? (Possible answers: Add 15 three times, or multiply 15 times 3). Third, let's try out our plan. (Guide learners to multiply 15 times 3).

	3) Repeat the steps above with a new problem: Musa has 4 plates of masa. There are 6 pieces of masa on each plate. How many pieces of masa does Musa have?
PRACTICE  10 minutes	1) Form small groups of learners. Make sure there is one advanced learner in each group. 2) Give each group a piece of cardboard containing a multiplication story (for example, “Laila went to a goat yard. She counted 8 goats at the yard. How many goat legs were in the yard?”). Every group should receive a different story. 3) Ask a volunteer in each group to read the problem aloud. Then each group should make a plan for how to solve it. 4) After groups had time to discuss, ask each group to present their story, their reasoning, and their solution.
WRITE  15 minutes	1) Write: Magajiya collected 5 bags of mangos. There were 4 mangos in each bag. How many did she collect? 2) Write: Laure bought 5 packets of pencils at a shop. If each packet had 7 pencils, how many pencils did she buy? Ask learners to copy each question and solve it with an equation.
ASSESS  10 minutes	1) Ask learners to hold up their notebooks to show what they wrote. 2) Ask learners to share how they solved each problem. 3) If time remains, ask learners to invent their own word problems and ask the class to solve them.
SUMMARIZE	Say: Remember, to solve a word problem we need to: 1 Understand the problem 2 Plan on the way to solve the problem



5 minutes

3 Act according to the plan

Ask learners to solve this problem at home:

Shafiu requires 2 mudus of maize to feed his family in a day.

How many mudus of maize will he need in a week?

LESSON PLAN 30.2: MATH

TOPIC	) Word problems involving division
OBJECTIVES	) Learners will be able to solve some one-step word problems involving multiplication
MATERIALS REQUIRED	) Paper and pencils for the learners) Division stories to distribute to groups
WARM-UP  5 minutes	Sing the Ina Yara song: Ina yara ina yara ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe. Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe.
LEARN  15 minutes	1) Say: Yesterday, we learned a three-step process for solving problems. Who can tell me what it is? (Answer: Understand the problem, make a plan, act on the plan). 2) Say: Zaliha has 24 pencils which she will place in pencil boxes. Each pencil box can contain 8 pencils. How many pencil boxes does she need? 3) Say: We need to understand the problem: In this case what are we to find? (They should say the number of pencil boxes Zaliha needs) 4) Say: Now we need to find a means of solving the problem: How can we solve it? (They should say division). 5) Now who can show us how to act on our plan? (A learner should solve $24 \div 8$ on the board). 6) Repeat the process with this story: Salim has 42 books on a shelf, which he wants to put in boxes. If each box can contain 6 books, how many boxes does he need?

PRACTICE  10 minutes	1) Form small groups of learners. Make sure there is one advanced learner in each group. 2) Give each group a piece of cardboard containing a division story. For example, Hassan, Ya'u and Tijjani went to pick oranges from the school garden, which they decided to share equally. How many oranges will each get if they have collected 39 oranges altogether?" 3) Ask a volunteer in each group to read and discuss the problem from the story and how will they plan to solve it. 4) After groups had time to discuss, ask each group to present their story, their reasoning, and their solution.
WRITE  10 minutes	1) Write: Karime wants to give an equal number of kola nuts to her 8 guests. If she has 32 kola nuts altogether, how many kola nuts will she give to each guest? Ask learners to copy the question and solve it.
ASSESS  5 minutes	1) Ask learners to hold up their notebooks to show what they wrote. 2) Ask learners to share how they solved each problem. 3) If time remains, ask learners to invent their own word problems and ask the class to solve them.
READ ALOUD  15 minutes	1) Read aloud "Shiga Motar Tunkiya da Kare da Akuya" and ask the comprehension questions. 2) Ask pupils what they heard about division in the story. 3) Ask pupils what they learnt today.

LESSON NUMBER 31.1: PRACTICE AND ASSESSMENT

CLASS	Math assessment																
OBJECTIVES	10 learners will take a one-on-one math test - Remaining learners will complete math problems																
MATERIALS	1) Paper and pencils for learners																
BEFORE CLASS BEGINS	1) Before class begins, write the following math problems on the <table><tr><td>$4 \times 2 =$</td><td>$3 \times 6 =$</td><td>$12 \overline{) 4} =$</td><td>$9 \overline{) 3} =$</td></tr><tr><td>$2 \times 9 =$</td><td>$5 \times 5 =$</td><td>$24 \overline{) 3} =$</td><td>$21 \overline{) 7} =$</td></tr><tr><td>$6 \times 4 =$</td><td>$4 \times 5 =$</td><td>$30 \overline{) 2} =$</td><td>$10 \overline{) 2} =$</td></tr><tr><td>$8 \times 3 =$</td><td>$3 \times 7 =$</td><td>$48 \overline{) 8} =$</td><td>$39 \overline{) 3} =$</td></tr></table> board:	$4 \times 2 =$	$3 \times 6 =$	$12 \overline{) 4} =$	$9 \overline{) 3} =$	$2 \times 9 =$	$5 \times 5 =$	$24 \overline{) 3} =$	$21 \overline{) 7} =$	$6 \times 4 =$	$4 \times 5 =$	$30 \overline{) 2} =$	$10 \overline{) 2} =$	$8 \times 3 =$	$3 \times 7 =$	$48 \overline{) 8} =$	$39 \overline{) 3} =$
$4 \times 2 =$	$3 \times 6 =$	$12 \overline{) 4} =$	$9 \overline{) 3} =$														
$2 \times 9 =$	$5 \times 5 =$	$24 \overline{) 3} =$	$21 \overline{) 7} =$														
$6 \times 4 =$	$4 \times 5 =$	$30 \overline{) 2} =$	$10 \overline{) 2} =$														
$8 \times 3 =$	$3 \times 7 =$	$48 \overline{) 8} =$	$39 \overline{) 3} =$														
ASSIGN PAIR WORK 10 minutes	1) Ask learners to sit in pairs. An advanced learner should sit with beginning learners. 2) Distribute paper and pencils. Explain that learners should copy and solve each problem on the board. 3) Choose 10 learners at random. Explain that you will call them one by one during the class to take an assessment.																
ASSESSMENT	1) Call the first learner. Sit in a quiet place separate from other learners.																

45 minutes	2) Explain to the learner that you will ask a few math questions. 3) Show the learner the numbers and math problems. For numbers, learners should simply name the number in Hausa. For multiplication and division, the learner should solve each problem. After each task, mark the total correct, making note of difficulties. During the assessment, do not help the learner or give away the answers. You can help the learner in the next lesson. 4) Call the next learner who was selected. Repeat steps 1-3. Continue until you have tested all 10 learners.
CLOSING 5 minutes	1) Ask the class to hold up their papers to show what they have written while you were testing individuals. 2) Collect the papers for correction.
80259212 14697483	

$3 \times 2 =$

$5 \times 6 =$

$4 \times 10 =$

$7 \times 3 =$

$6 \overline{) 3} =$

$20 \overline{) 4} =$

$21 \overline{) 3} =$

Toka, Talle and Marka are given 15 oranges to share among themselves, how many oranges will each have?

Name	Numbers correct	Multiplication correct	Division correct	Notes
1.	/8	/4	/4	
2.	/8	/4	/4	
3.	/8	/4	/4	

4.	/8	/4	/4	
5.	/8	/4	/4	
6.	/8	/4	/4	
7.	/8	/4	/4	
8.	/8	/4	/4	
9.	/8	/4	/4	
10.	/8	/4	/4	
Observations:				

Teacher signature: _____

Date: _____

LESSON NUMBER 31.2: REVIEW AND REINFORCEMENT

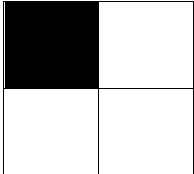
TOPIC	Review
OBJECTIVES	) Help learners in different areas of difficulty
MATERIALS	) Problem cards in different areas
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected assignment from the previous day. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	) Identify learners that have not performed well in the tasks from the previous day.) Group the learners based on the challenges they face. Assign an advanced learner to each group.) Give each group a card with problems based on their challenges.) Ask each group to solve the problems. Encourage the advanced learners to assist the beginners.) Go round to support each group as they work through the problems
CLOSING 5 minutes	) Ask learners to continue practicing the problems at home

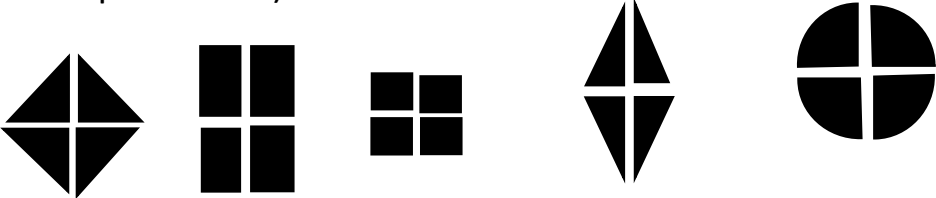
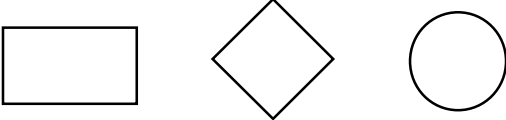
LESSON PLAN 32.1: MATH

TOPIC	Fractions
OBJECTIVES	Learners should be able to recognize and write $\frac{1}{2}$
MATERIALS REQUIRED	Flash cards Orange and a knife to cut it Assorted semi circles, rectangles, triangles, etc
WARM-UP  5 minutes	1) Say: In previous lessons, we talked about sharing many items equally. Can you think of examples when people might have to share one item? 2) Say: How do we decide how to fairly share one item?
LEARN  10 minutes	1) Show an orange to the class. Say: Imagine I want to share this orange with a friend. How can I cut it? Say: We can share the orange by cutting it into 2 equal parts. 2) Cut the orange into 2 equal parts and show the learners. Say: We shared the orange by cutting it into 2 equal parts. Each part is 1 of the 2 parts. We write this as $\frac{1}{2}$. 3) Draw a rectangle on the board. Ask a learner to color in half the rectangle, then write $\frac{1}{2}$ next to it. It should look like this when the learner is finished. $\frac{1}{2}$ 4) Draw more shapes on the board (circle, oval, square, triangle, etc). For each shape, call a learner to color in half of the shape, then write $\frac{1}{2}$ next to it.

PRACTICE 10 minutes	1) Tell learners that they will each receive half of a shape. They should find another learner who has the other half. They should put their halves together to make a whole. 2) After each learner finds their other half, ask all learners stand in pairs. Learners should hold their shapes together to make a whole. 3) Ask learners how they knew how to identify which shapes went together to make a whole (shapes should be both identical shape and size). 4) Repeat steps 2 and 3 several times so that learners can try the exercise with different shapes.
WRITE 15 minutes	Draw these shapes on the board. Ask learners to copy the shapes into their exercise books, then color in one-half of each shape. They should write $\frac{1}{2}$ underneath.
ASSESS 10 minutes	1) Ask learners to hold up their books to show what they colored. 2) Ask learners to fill in the correct shading on the board.
READ ALOUD 10 minutes	1) Read aloud “Jayayyar Wata da Rana” and ask the comprehension questions. 2) Ask pupils what they heard about half in the story. 3) Ask pupils what they learnt today.

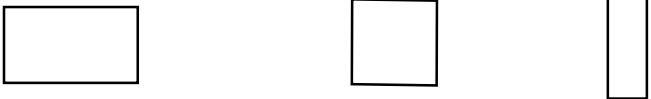
LESSON PLAN 32.2: MATH

TOPIC	Fractions
OBJECTIVES	Learners should be able to recognize and write $\frac{1}{4}$
MATERIALS REQUIRED	Orange and a knife to cut it Assorted semi circles, rectangles, triangles, etc
WARM-UP 5 minutes	Say: Yesterday, we talked about sharing equally. When one only has one item, how can we share it fairly?
LEARN 15 minutes	1) Cut an orange into 2 equal parts and show the learners. Say: Yesterday, we shared an orange by cutting it into 2 equal parts. Each part is 1 of the 2 parts. We write this as $\frac{1}{2}$. 2) Say: What happens if I take each half and divide it again? Divide each half again so that you have four pieces. Say: When we divide it again, we have four pieces of orange. Each part is one of four parts. We write this as $\frac{1}{4}$. 3) Draw a square on the board. Ask a learner to divide it into 4 pieces, then color in $\frac{1}{4}$ of the rectangle. They should write $\frac{1}{4}$ next to it.  $\frac{1}{4}$ 4) Continue drawing different shapes on the board (circle, oval, square, etc). For each shape, call a learner to color in a quarter of the shape, then write $\frac{1}{4}$ next to it.

PRACTICE  10 minutes	1) Tell learners that they will each receive a quarter of a shape. They should find three other learners who have the other three quarters. They should put their pieces together to make a whole. 2) Give learners assorted quarter shapes made from paper (see examples below).  After each learner finds three other quarters to make a whole, ask all learners stand in their group of four. Learners should hold their shapes together to make a whole. 3) Ask learners how they knew how to identify which shapes went together to make a whole (shapes should be both identical shape and size). 4) Repeat steps 2 and 3 several times so that learners can try the exercise with different shapes.
WRITE  15 minutes	Draw these shapes on the board. Ask learners to copy the shapes into their exercise books, then color in one quarter of each shape. They should write $\frac{1}{4}$ underneath. 
ASSESS 5 minutes	1) Ask learners to hold up their books to show what they colored. 2) Ask learners to fill in the correct shading on the board.
READ ALOUD  15 minutes	1) Read aloud “Yadda Gimbiya Larai Ta Ketara Hamadar Talali” and ask the comprehension questions. 2) Ask pupils what they heard about $\frac{1}{4}$ in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 33.1: MATH

TOPIC	) Fractions	
OBJECTIVES	) Learners should be able to recognize and write $\frac{1}{3}$	
MATERIALS REQUIRED	) Orange and a knife to cut it (or another food to divide)) Assorted semi circles, rectangles, triangles, etc) Stones, sticks or other objects	
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN 10 minutes	1) Cut an orange into 3 equal parts and show the learners. Say: We have been sharing objects in halves and quarters. Today, we will talk about sharing in threes. If I take an orange and divide it in 3 parts, I have 3 pieces. Each part is one of 3 parts. We write this as $\frac{1}{3}$. 2) Draw a rectangle on the board. Ask a learner to divide it into 3 pieces, then color in $\frac{1}{3}$ of the rectangle. They should write $\frac{1}{3}$ next to it. $\frac{1}{3}$ 3) Say: We can also divide groups of objects into thirds. Call 9 learners to the front of the room. Ask them to organize themselves into 3 groups. Then ask one third of the learners to step forward. 4) Repeat with different groups of learners, then objects (such as sticks or stones).	

PRACTICE  10 minutes	1) Tell learners that they will each receive a third of a shape. They should find two other learners who have the other two thirds. They should put their pieces together to make a whole. 2) Give learners assorted shapes made from paper (see examples below).  Ask learners to stand with their group of three and hold up their shapes to make a whole. Learners should hold their shapes together to make a whole. 3) Ask learners how they knew how to identify which shapes went together to make a whole. 4) Repeat steps 2 and 3 several times so that learners can try the exercise with different shapes.
WRITE  15 minutes	Draw these shapes on the board. Ask learners to copy the shapes into their exercise books, then color in one quarter of each shape. They should write $\frac{1}{3}$ underneath. 
ASSESS  5 minutes	Ask learners to hold up their books to show what they colored. Ask learners to fill in the correct shading on the board.
READ ALOUD  15 minutes	1) Read aloud “Wani Manomi da ‘Yan Kwadago,” and ask the comprehension questions. 2) Ask pupils what they heard about $\frac{1}{3}$ in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 33.2: MATH

TOPIC	) Recognize, read and write $\frac{2}{3}$ using objects	
OBJECTIVES	) Learners should be able to recognize, read and write $\frac{2}{3}$	
MATERIALS REQUIRED	) Orange and a knife to cut it (or another food to divide)) Assorted semi circles, rectangles, triangles, etc) Stones, sticks or other objects	
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya
LEARN  15 minutes	1) Cut an orange into 3 equal parts and show the learners. Say: If I take an orange and divide it in 3 parts, I have 3 pieces. Each part is one of 3 parts. If I have two of the parts, then I write it as $\frac{2}{3}$. 2) Draw a rectangle on the board. Ask a learner to divide it into 3 pieces, then color in $\frac{2}{3}$ of the rectangle. They should write $\frac{2}{3}$ next to it.  $\frac{2}{3}$ 3) Say: We can also divide groups of objects into thirds. Call 9 learners to the front of the room. Ask them to organize themselves into 3 groups. Then ask one third of the learners to step forward. Then ask another third of learners to come forward. Explain that this is two thirds of the learners. 4) Repeat with different groups of learners, then objects (such as sticks or stones).	

PRACTICE 10 minutes	1) Put learners in small groups. Give each group a different fraction ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{2}{3}$). 2) Ask each group to represent the fraction in at least two different ways (for example, a drawing and using objects from the environment). 2) Ask learners to present their fraction and representation to the larger group.
WRITE 10 minutes	Draw the following on the board. Ask learners to draw the remaining fractions.  $\frac{1}{2}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{4}$
ASSESS 15 minutes	Ask learners to order the fractions from least to greatest on the board. They should write the fraction and draw the picture. Ask learners to show you what one-third of the class looks like. Then ask them to show you one half, then one quarter.
SUMMARIZE 5 minutes	1) Ask learners what they have learned about fractions. 2) Say: When we have a whole quantity, we can divide it into different sized parts. Fractions show us the parts of a whole. 3) Ask learners to think about ways they can use fractions in their daily life.

LESSON PLAN 34.1: MATH

TOPIC	) Counting up to 1000.																																																																																																				
OBJECTIVES	) Learners should be able to count and write numbers by 10 up to 1000.																																																																																																				
MATERIALS REQUIRED	) Thousands chart) Stones or other objects																																																																																																				
WARM-UP 5 minutes	Say: How many fingers do you think are in this class? (Allow learners to guess). Say: Let’s count by 10s to see how many fingers we have in this class. I’ll point to each person as we count. When I point to you, hold up your 10 fingers. Say: If we have 100 learners in a class, we will have 1,000 fingers.																																																																																																				
LEARN  10 minutes	1) Say: Today we will count and write numbers up to 1000. It’s very slow to count all the numbers one by one. That would be like counting fingers individually instead of in 10s. So for big numbers like 1000, we will count by 10s. Show a Thousands chart: <table><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td><td>100</td></tr><tr><td>110</td><td>120</td><td>130</td><td>140</td><td>150</td><td>160</td><td>170</td><td>180</td><td>190</td><td>200</td></tr><tr><td>210</td><td>220</td><td>230</td><td>240</td><td>250</td><td>260</td><td>270</td><td>280</td><td>290</td><td>300</td></tr><tr><td>310</td><td>320</td><td>330</td><td>340</td><td>350</td><td>360</td><td>370</td><td>380</td><td>390</td><td>400</td></tr><tr><td>410</td><td>420</td><td>430</td><td>440</td><td>450</td><td>460</td><td>470</td><td>480</td><td>490</td><td>500</td></tr><tr><td>510</td><td>520</td><td>530</td><td>540</td><td>550</td><td>560</td><td>570</td><td>580</td><td>590</td><td>600</td></tr><tr><td>610</td><td>620</td><td>630</td><td>640</td><td>650</td><td>660</td><td>670</td><td>680</td><td>690</td><td>700</td></tr><tr><td>710</td><td>720</td><td>730</td><td>740</td><td>750</td><td>760</td><td>770</td><td>780</td><td>790</td><td>800</td></tr><tr><td>810</td><td>820</td><td>830</td><td>840</td><td>850</td><td>860</td><td>870</td><td>880</td><td>890</td><td>900</td></tr><tr><td>910</td><td>920</td><td>930</td><td>940</td><td>950</td><td>960</td><td>970</td><td>980</td><td>990</td><td>1000</td></tr></table> 2) Ask learners to count with you by 10s as you point. 3) Point to numbers out of order and ask learners to identify them.	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	1000
10	20	30	40	50	60	70	80	90	100																																																																																												
110	120	130	140	150	160	170	180	190	200																																																																																												
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	4) Say: If you were a farmer, why would it be useful to count up to 1,000?
PRACTICE  15 minutes	1) Put learners into 10 groups. Tell each group they should find 100 stones (or leaves or other small objects). 2) When learners return, tell them to organize their stones into groups of 10. 3) As a class, count all the stones by 10. There should be 1000 total.
WRITE  20 minutes	1) Ask learners to copy the Thousands chart into their notebooks.
ASSESS  5 minutes	1) Point to different numbers on the Thousands Chart, and ask learners to say the number.
SUMMARIZE  5 minutes	1) Ask learners what they have learned today. 2) Ask learners to practice writing numbers in 10s at home.

LESSON PLAN 34.2: MATH

TOPIC	) Counting up to 1000
OBJECTIVES	) Learners should be able to count and write numbers by 100 up to 1000.
MATERIALS REQUIRED	) Prepared thousands chart) Hundred Naira notes

WARM-UP



5 minutes

Ina yara ina yara ina yara yara mu ne yaran yanzu.
Ina yara ina yara ina yara yara mu ne manyan gobe.
Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu.
Ina yara ina yara ina yara yara mu ne manyan gobe.

LEARN



15 minutes

1) Say: **In our previous lesson, we learnt how to count up to 1000 by 10s. Let's review.**

2) Show the Thousands chart. Ask a learner to lead the class in counting by 10s.

10	20	30	40	50	60	70	80	90	100
110	120	130	140	150	160	170	180	190	200
210	220	230	240	250	260	270	280	290	300
310	320	330	340	350	360	370	380	390	400
410	420	430	440	450	460	470	480	490	500
510	520	530	540	550	560	570	580	590	600
610	620	630	640	650	660	670	680	690	700
710	720	730	740	750	760	770	780	790	800
810	820	830	840	850	860	870	880	890	900
910	920	930	940	950	960	970	980	990	1000

3) Ask learners if they think there is an even faster way to count to 1,000. Then show learners how to count by 100s.

	4) Show learners how to count to 1,000 using 100 Naira notes. Then call a learner to try counting.
PRACTICE  10 minutes	1) Put learners into small groups. Give each group ten small pieces of paper the size of 100 Naira notes. 2) Ask learners to label each note as 100. They may decorate each so that it looks like 100 Naira. 3) Ask learners to count their handmade 100 Naira notes in each group. The total should be 1,000. Then ask the class to count the total Naira they have, counting by 100s.
WRITE  10 minutes	1) Say numbers between 100 and 1,000. Ask learners to write each number in their exercise books.
ASSESS  5 minutes	1) Ask learners to compare their exercise books with a peer to ensure they wrote the same numbers. Walk through the class and check selected books.
READ ALoud 15 minutes	1) Read aloud “Gwarzon Manomin Shekara” and ask the comprehension questions. 2) Ask pupils where they heard hundreds and thousands in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 35.1: MATH

TOPIC	) Addition																										
OBJECTIVES	) Learners should be able to add numbers between 100 and 1000																										
MATERIALS REQUIRED	) Sticks in bundles of 100s, 10s and 1s																										
WARM-UP  5 minutes	Ina yara ina yara ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe. Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe.																										
LEARN  15 minutes	1) Say: You have been adding single digit numbers like $7 + 6$ and two digit numbers like $32 + 15 = 47$. Today we are going to do the same thing with bigger numbers. 2) Imagine you must add 124 and 211 together. Show this chart on the blackboard. Explain that 124 means 1 hundred, 2 tens and 4 units, and 211 means 2 hundreds, 1 ten + and 1 unit. <table><tr><th>H</th><th>T</th><th>U</th></tr><tr><td>1</td><td>2</td><td>4</td></tr><tr><td>2</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td></td></tr></table> 3) Show these quantities using bundles of sticks: 1 bundle of hundreds, 2 bundles of tens and 4 units + 2 bundles of hundreds, 1 bundles of tens and 1 unit 4) Show the total using sticks, then write the answer in the chart. <table><tr><th>H</th><th>T</th><th>U</th></tr><tr><td>1</td><td>2</td><td>4</td></tr><tr><td>2</td><td>1</td><td>1</td></tr><tr><td>3</td><td>3</td><td>5</td></tr></table> 5) Repeat the process with different numbers.			H	T	U	1	2	4	2	1	1				H	T	U	1	2	4	2	1	1	3	3	5
H	T	U																									
1	2	4																									
2	1	1																									
H	T	U																									
1	2	4																									
2	1	1																									
3	3	5																									

PRACTICE 10 minutes	1) Write these equations on the board: <table><tr><td></td><td>H</td><td>T</td><td>U</td></tr><tr><td></td><td>1</td><td>2</td><td>3</td></tr><tr><td>+</td><td>2</td><td>2</td><td>4</td></tr><tr><td></td><td></td><td></td><td></td></tr></table><table><tr><td></td><td>H</td><td>T</td><td>U</td></tr><tr><td></td><td>1</td><td>0</td><td>5</td></tr><tr><td>+</td><td>1</td><td>1</td><td>2</td></tr><tr><td></td><td></td><td></td><td></td></tr></table><table><tr><td></td><td>H</td><td>T</td><td>U</td></tr><tr><td></td><td>2</td><td>1</td><td>2</td></tr><tr><td>+</td><td>2</td><td>3</td><td>7</td></tr><tr><td></td><td></td><td></td><td></td></tr></table><table><tr><td></td><td>H</td><td>T</td><td>U</td></tr><tr><td></td><td>3</td><td>1</td><td>2</td></tr><tr><td>+</td><td>1</td><td>3</td><td>6</td></tr><tr><td></td><td></td><td></td><td></td></tr></table> 2) Put learners in small groups. Give learners bundles of sticks in hundreds, tens and units. Ask learners to solve these equations using their sticks.		H	T	U		1	2	3	+	2	2	4						H	T	U		1	0	5	+	1	1	2						H	T	U		2	1	2	+	2	3	7						H	T	U		3	1	2	+	1	3	6				
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+	1	3	6																																																														
WRITE 15 minutes	1) Ask learners to copy the exercises into their books in the format below, then write the correct answer: <table><tr><td>123</td><td>312</td></tr><tr><td><u>+224</u></td><td><u>+136</u></td></tr><tr><td>_____</td><td>_____</td></tr></table><table><tr><td>212</td><td>105</td></tr><tr><td><u>+237</u></td><td><u>+112</u></td></tr><tr><td>_____</td><td>_____</td></tr></table>	123	312	<u>+224</u>	<u>+136</u>	_____	_____	212	105	<u>+237</u>	<u>+112</u>	_____	_____																																																				
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ASSESS 10 minutes	1) Ask learners to compare answers with a partner. 2) Ask learners to write the correct answers on the board and explain how they got them.																																																																
SUMMARIZE	1) Ask learners what they learnt today.																																																																

 5 minutes	2) Give learners the following problems to try at home. 231 <u>+421</u> _____ 342 <u>+316</u> _____ 552 <u>+423</u> _____
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LESSON PLAN 35.2: MATH									
TOPIC	) Addition								
OBJECTIVES	) Learners should be able to add 3 digit numbers								
MATERIALS REQUIRED	) Paper and pencils								
WARM-UP 5 minutes	Ina yara ina yara ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe. Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe.								
LEARN  15 minutes	1) Say: We have been adding numbers using concrete materials. How would you feel about adding without these materials? 2) Say: Yesterday, we practiced with sticks. Sticks showed us how our three digit numbers are made of hundreds, tens and ones. We can also show this on the board. 3) Show learners how to use expanded addition to add. <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">H T U</td><td></td></tr> <tr> <td style="text-align: center;">1 2 4</td><td style="text-align: center;">= 100 + 20 + 4</td></tr> <tr> <td style="text-align: center;"><u>+ 2 1 1</u></td><td style="text-align: center;"><u>= 200 + 10 + 1</u></td></tr> <tr> <td style="text-align: center;"><u>3 3 5</u></td><td style="text-align: center;"><u>= 300 + 30 + 5</u></td></tr> </table>	H T U		1 2 4	= 100 + 20 + 4	<u>+ 2 1 1</u>	<u>= 200 + 10 + 1</u>	<u>3 3 5</u>	<u>= 300 + 30 + 5</u>
H T U									
1 2 4	= 100 + 20 + 4								
<u>+ 2 1 1</u>	<u>= 200 + 10 + 1</u>								
<u>3 3 5</u>	<u>= 300 + 30 + 5</u>								

	4) Say: You see that when we add vertically, we are not adding single digits. We are adding the ones, the tens, and the hundreds, just like we added with our sticks. 5) Repeat step 3 with different numbers.												
PRACTICE  10 minutes	Ask learners to solve the following problems in small groups. <table><tr><td>321</td><td>512</td><td>612</td></tr><tr><td><u>+424</u></td><td><u>+136</u></td><td><u>+337</u></td></tr><tr><td>_____</td><td>_____</td><td>_____</td></tr></table>	321	512	612	<u>+424</u>	<u>+136</u>	<u>+337</u>	_____	_____	_____			
321	512	612											
<u>+424</u>	<u>+136</u>	<u>+337</u>											
_____	_____	_____											
WRITE  10 minutes	Ask learners to copy and solve the following problems. <table><tr><td>231</td><td>711</td><td>335</td><td>681</td></tr><tr><td><u>+514</u></td><td><u>+282</u></td><td><u>+444</u></td><td><u>+216</u></td></tr><tr><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr></table>	231	711	335	681	<u>+514</u>	<u>+282</u>	<u>+444</u>	<u>+216</u>	_____	_____	_____	_____
231	711	335	681										
<u>+514</u>	<u>+282</u>	<u>+444</u>	<u>+216</u>										
_____	_____	_____	_____										
ASSESS  5 minutes	1) Ask learners to hold up their notebooks to show the problems they solved. 2) Ask learners to write the correct answers on the board and explain how they got them.												
READ ALOUD  15 minutes	1) Read aloud “Sarsar Da Taurari” and ask the comprehension questions. 2) Ask pupils where they heard addition in the story. 3) Ask pupils what they learnt today.												

LESSON PLAN 36.1: MATH

TOPIC	) Subtraction													
OBJECTIVES	) Learners should be able to subtract numbers within 1000													
MATERIALS REQUIRED	) Bundles of sticks in hundreds, tens and units) Paper and pencils for the learners													
WARM-UP 5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya												
LEARN  15 minutes	1) Say: We have been adding three digit numbers, like $432 + 315 = 747$. Who can solve this question on the board? How do you think that this kind of addition could be useful for a vendor? Can someone show us another example of three digit addition? 2) Say: Today, we will learn to subtract 3 digit numbers. Imagine you want to subtract 124 from 347. You can do this by using concrete materials such as sticks. – Show this chart on the blackboard. Explain that 347 means 3 hundreds, 4 tens and 7 units, and that 124 means 1 hundred, 2 tens and 4 units. <table border="1" style="border-collapse: collapse; text-align: center; width: 150px;"> <thead> <tr> <th>H</th><th>T</th><th>U</th></tr> </thead> <tbody> <tr> <td>3</td><td>4</td><td>7</td></tr> <tr> <td>1</td><td>2</td><td>4</td></tr> <tr> <td> </td><td> </td><td> </td></tr> </tbody> </table>		H	T	U	3	4	7	1	2	4			
H	T	U												
3	4	7												
1	2	4												
	) Show 3 bundles of hundreds 4 bundles of tens and 7 units.) Remove 1 bundle of hundreds 2 bundles of tens and 4 units.) Ask learners how many sticks are left.													

4) Write the answer in the chart.

H	T	U
3	4	7
1	2	4
2	2	3

5) Repeat the process with different numbers.

PRACTICE

15 minutes

1) Write these equations on the board:

	H	T	U
	2	2	3
—	1	1	2

	H	T	U
	1	4	8
—	1	3	6

	H	T	U
	2	5	2
—	1	3	1

	H	T	U
	2	6	8
—	2	3	6

2) Put learners in small groups. Give learners bundles of sticks in hundreds, tens and units. Ask learners to solve these equations using their sticks.

WRITE

1) Ask learners to copy the exercises into their books in the format below, then write the correct answer:

10 minutes	$\begin{array}{r} 379 \\ -214 \\ \hline \end{array}$ $\begin{array}{r} 842 \\ -431 \\ \hline \end{array}$ $\begin{array}{r} 545 \\ -230 \\ \hline \end{array}$ $\begin{array}{r} 225 \\ -112 \\ \hline \end{array}$
ASSESS 10 minutes	1) Ask learners to compare answers with a partner. 2) Ask learners to come to the board to write the correct answers and explain how they got it.
SUMMARIZE  5 minutes	1) Say: When we subtract, we always put the larger number is on top. Why do you think that is? 2) Give learners the following problems to try at home. $\begin{array}{r} 431 \\ -220 \\ \hline \end{array}$ $\begin{array}{r} 366 \\ -115 \\ \hline \end{array}$ $\begin{array}{r} 552 \\ -423 \\ \hline \end{array}$

LESSON PLAN 36.2: MATH

TOPIC	) Subtraction	
OBJECTIVES	) Learners should be able to subtract within 1000	
MATERIALS REQUIRED	) Paper and pencils for the learners	
WARM-UP  5 minutes	Oyoyo oyoyo Oyoyo Baba ya dawo Ya dawo daga kasuwa Ya sawo muna goriba Ni an bani guda huɗu Naci daya saura uku	In ya ci ɗaya saura biyu In ta ci ɗaya saura ɗaya In ka ci ɗaya saura ɗaya In ya ci ɗaya ba ko ɗaya

LEARN  15 minutes	1) Say: We have been subtracting numbers using concrete materials. How would you feel about subtraction without concrete materials? 2) Say: Just like with addition, we can expand our three-digit units into hundreds, tens and units for subtraction. <table><tr><td>H</td><td>T</td><td>U</td><td></td><td></td></tr><tr><td>3</td><td>2</td><td>4</td><td>=</td><td>300 + 20 + 4</td></tr><tr><td>-2</td><td>1</td><td>1</td><td>=</td><td>200 + 10 + 1</td></tr><tr><td colspan="5"> </td></tr><tr><td>1</td><td>1</td><td>3</td><td>=</td><td>100 + 10 + 3</td></tr></table> 3) Say: You see that when we subtract vertically, we are not subtracting single digits. We are subtracting the ones, the tens, and the hundreds, just like we did with our sticks. 4) Repeat step 4 with different numbers. 5) Say: How could three digit subtraction be useful for a farmer or a vendor?	H	T	U			3	2	4	=	300 + 20 + 4	-2	1	1	=	200 + 10 + 1						1	1	3	=	100 + 10 + 3
H	T	U																								
3	2	4	=	300 + 20 + 4																						
-2	1	1	=	200 + 10 + 1																						
1	1	3	=	100 + 10 + 3																						
PRACTICE  10 minutes	Ask learners to solve the following questions in small groups. <table><tr><td>167</td><td>212</td><td>155</td></tr><tr><td>- 124</td><td>-110</td><td>- 37</td></tr><tr><td> </td><td> </td><td> </td></tr></table>	167	212	155	- 124	-110	- 37																			
167	212	155																								
- 124	-110	- 37																								
WRITE  10 minutes	Ask learners to copy and solve the following problems.																									

	$\begin{array}{r} 514 \\ -200 \\ \hline \end{array}$ $\begin{array}{r} 711 \\ -282 \\ \hline \end{array}$ $\begin{array}{r} 335 \\ -145 \\ \hline \end{array}$ $\begin{array}{r} 780 \\ -317 \\ \hline \end{array}$
ASSESS  5 minutes	Ask learners to hold up their notebooks to show the problems they solved.
READ ALOUD  15 minutes	1) Read aloud “Gwarzon Manomin Shekara” and ask the comprehension questions. 2) Ask pupils where they heard about subtraction in the story. 3) Ask pupils what they learnt today.

LESSON PLAN 37.1: MATH

TOPIC	Addition
OBJECTIVES	) Learners should be able to add with money
MATERIALS REQUIRED	) Paper and pencils
WARM-UP  5 minutes	Ina yara ina yara ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe. Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe.
LEARN  10 minutes	1) Say: We have been adding and subtracting within 1000. We often have to add and subtract within 1000 when we use money. Today we are going to use an imaginary store to practice. 2) Display 3 different items (for example, a book, a box of chalk, and a package of exercise books). Display a price tag for each item that is ₦500 or less. 3) Explain that we use the ₦ sign to indicate that the number indicates an amount of money. 4) Call a learner to the front. Explain that the learner should choose any two items. The learner should estimate the total cost of the two items, then confirm the estimate by writing the sum on the board using ₦. For example: $ \begin{array}{r} \text{₦}300 \\ +\text{₦}400 \\ \hline \text{₦}700 \end{array} $ 5) Call other learners to the front and repeat. Each learner can choose different combinations of items, then add them on the board.

PRACTICE  10 minutes	1) Put learners in small groups. Explain that they are in a store and one learner per group is the vendor. Give each vendor 3 objects and ask the vendor to put a price on each item (₦500 or less). 2) Each learner in the small group should choose two items from the store, then add them to find the total cost. 3) Tell learners in each group that they have only ₦700 to spend. Ask learners to find out which combinations of items they can buy.															
WRITE  15 minutes	1) Write the following problems on the board and ask learners to solve them in their exercise books. Before students begin, remind them how to carry numbers when digits add to more than 10. <table><tr><td>₦321</td><td>₦512</td><td>₦612</td><td>₦688</td><td>₦249</td></tr><tr><td><u>+₦424</u></td><td><u>+₦136</u></td><td><u>+₦337</u></td><td><u>+₦216</u></td><td><u>+₦383</u></td></tr><tr><td>_____</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr></table>	₦ 321	₦ 512	₦ 612	₦ 688	₦ 249	<u>+₦424</u>	<u>+₦136</u>	<u>+₦337</u>	<u>+₦216</u>	<u>+₦383</u>	_____	_____	_____	_____	_____
₦ 321	₦ 512	₦ 612	₦ 688	₦ 249												
<u>+₦424</u>	<u>+₦136</u>	<u>+₦337</u>	<u>+₦216</u>	<u>+₦383</u>												
_____	_____	_____	_____	_____												
ASSESS  10 minutes	1) Ask learners to compare their answers with a friend. 2) Ask different learners to write the answers on the board and explain how they got their answers. Ask learners to find out which items they can buy.															
SUMMARIZE  5 minutes	1) Ask learners what they learnt today. 2) Say: Remember addition involving money is like any other addition. We simply attach the currency sign (₦).															

LESSON PLAN 37.2: MATH

TOPIC	) Subtraction involving money
OBJECTIVES	) Learners should be able to make change with subtraction
MATERIALS REQUIRED	) Papers and pencils
WARM-UP 5 minutes	Ina yara ina yara ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe. Mu koyi karatu da lissafi ina yara yara mu ne yaran yanzu. Ina yara ina yara ina yara yara mu ne manyan gobe.
LEARN  15 minutes	1) Say: You learnt how to add money with the currency sign. Today we will do subtraction with money. Subtraction involving money is like any other subtraction. It means we are taking one quantity of money away from another quantity of money. 2) Display 3 different items (for example, apples, oranges, bananas). Display a price tag for each item that is ₦500 or less. 2) Call a learner to the front. Ask the learner to choose an item to buy. Then give the learner a ₦1000 note (real or fake). Say: If you pay with this ₦1000 note, how much change do you get after purchasing this item? 3) Write the subtraction equation on the board. For example, $\begin{array}{r} \text{₦}1000 \\ - \text{₦}200 \\ \hline \end{array}$ 5) Repeat with different learners.

PRACTICE  10 minutes	1) Put learners in small groups and explain that they are in a store. One learner per group is the vendor. Give each vendor 3 objects and ask the vendor to put a price on each item (₦500 or less). 2) Explain that all other learners in the group have ₦1000 to spend. Each learner should buy 1 item from the store, using the ₦1000. The vendor should give proper change. 3) If time remains, ask learners to take turns being the vendor. Learners can also try buying two items from the store instead of one.															
WRITE  10 minutes	1) Write the following problems on the board and ask learners to solve them in their exercise books. Before students begin, remind them how to borrow numbers when subtracting a larger digit from a smaller one. <table><tr><td>₦1000</td><td>₦1000</td><td>₦500</td><td>₦500</td><td>₦200</td></tr><tr><td><u>- ₦ 300</u></td><td><u>- ₦ 250</u></td><td><u>- ₦220</u></td><td><u>- ₦150</u></td><td><u>- ₦ 75</u></td></tr><tr><td>_____</td><td>_____</td><td>_____</td><td>_____</td><td>_____</td></tr></table>	₦1000	₦1000	₦500	₦500	₦200	<u>- ₦ 300</u>	<u>- ₦ 250</u>	<u>- ₦220</u>	<u>- ₦150</u>	<u>- ₦ 75</u>	_____	_____	_____	_____	_____
₦1000	₦1000	₦500	₦500	₦200												
<u>- ₦ 300</u>	<u>- ₦ 250</u>	<u>- ₦220</u>	<u>- ₦150</u>	<u>- ₦ 75</u>												
_____	_____	_____	_____	_____												
ASSESS  5 minutes	1) Ask learners to compare their answers with a friend. 2) Ask different learners to write the answers on the board and explain how they got their answers.															
READ ALOUD  15 minutes	1) Read aloud “Tsaron Shago Dabo,” and ask the comprehension questions. 2) Ask pupils what they heard about money in the story. 3) Ask pupils what they learnt today.															

LESSON PLAN 38.1: MATH

TOPIC	J Revision on multiplication and division	
OBJECTIVES	J Learners will practice multiplication and division	
MATERIALS REQUIRED	J Story problems to distribute to small groups	
WARM-UP  5 minutes	<u>Wakar Rubanyawa</u> Daya sau daya – Daya, Daya sau biyu - Biyu, Daya sau uku – Uku, Daya sau huđu – Huđu, Daya sau biyar – Biyar	Biyu sau daya – Biyu, Biyu sau biyu - Huđu, Biyu sau uku – Shida, Biyu sau huđu – Takwas, Biyu sau biyar – Goma
LEARN  15 minutes	1) Say: We have covered many topics in math this year. It is time to revise some of our topics. Today we are going to revise multiplication and division. Who can define multiplication and division for us? 2) Say: Imagine I have four friends, and I want to give each of them five masa. How do I find out how many I need? After learners respond, ask a learner to write the equation on the board. They should write: $4 \times 5 = 20$ 3) Say: Imagine I have 30 kola nuts, and I want to distribute them equally among 10 friends. How many should I give each friend? After learners respond, ask a learner to write the equation on the board. They should write: $30 \div 10 = 3$. 4) Ask learners to think of their own story problems for multiplication and division. After each learner thinks of a story, ask another learner to solve it on the board.	

PRACTICE  10 minutes	1) Put learners in small groups. Make sure there is an advanced learner in each group. 2) Give learners papers with story problems (examples below). Ask learners to solve the problems in groups.) There are 20 students in a class. A teacher wants to give each of them 3 masa. How many masa are needed in all?) There are 4 pencils in a box, and Musa buys 3 boxes. How many pencils did he buy?) Fatima has 24 eggs and wants to share them equally among her six children. How many eggs does each child receive?) There are 50 books in a library and 25 children in a class. How many books can each child have?												
WRITE  15 minutes	1) Write the following problems on the board. Ask learners to copy and solve them: <table><tr><td>$2 \times 4 =$</td><td>$24 \div 6 =$</td></tr><tr><td>$3 \times 5 =$</td><td>$18 \div 3 =$</td></tr><tr><td>$4 \times 6 =$</td><td>$15 \div 5 =$</td></tr><tr><td>$5 \times 7 =$</td><td>$42 \div 6 =$</td></tr><tr><td>$6 \times 8 =$</td><td>$63 \div 7 =$</td></tr><tr><td>$7 \times 9 =$</td><td>$8 \div 4 =$</td></tr></table>	$2 \times 4 =$	$24 \div 6 =$	$3 \times 5 =$	$18 \div 3 =$	$4 \times 6 =$	$15 \div 5 =$	$5 \times 7 =$	$42 \div 6 =$	$6 \times 8 =$	$63 \div 7 =$	$7 \times 9 =$	$8 \div 4 =$
$2 \times 4 =$	$24 \div 6 =$												
$3 \times 5 =$	$18 \div 3 =$												
$4 \times 6 =$	$15 \div 5 =$												
$5 \times 7 =$	$42 \div 6 =$												
$6 \times 8 =$	$63 \div 7 =$												
$7 \times 9 =$	$8 \div 4 =$												
ASSESS  10 minutes	1) Ask learners to check their answers with a friend. 2) Ask learners to write the correct answers on the board. 3) Ask learners whether they noticed any patterns (they should say the multiplication is the opposite of division: 2×4 is 8, and $8 \div 4$ is 2).												
SUMMARIZE 	1) Ask the class what they learnt today 2) Give them the following exercises to try at home. <table><tr><td>$3 \times 12 =$</td><td>$10 \times 4 =$</td><td>$7 \times 7 =$</td></tr></table>	$3 \times 12 =$	$10 \times 4 =$	$7 \times 7 =$									
$3 \times 12 =$	$10 \times 4 =$	$7 \times 7 =$											

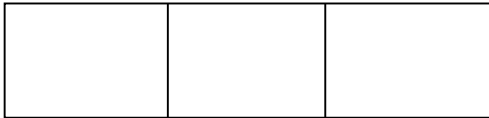
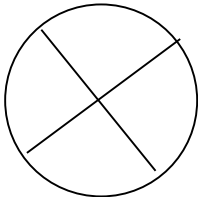
5 minutes	$36 \overline{) 3} =$	$30 \overline{) 5} =$	$48 \overline{) 4} =$
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LESSON PLAN 38.2: MATH		
TOPIC	) Revision on whole numbers and fractions.	
OBJECTIVES	) Learners will review and practice whole numbers and fractions	
MATERIALS REQUIRED		
WARM-UP  5 minutes	<u>Wakar Rubanyawa</u> Daya sau daya – Daya, Daya sau biyu - Biyu, Daya sau uku – Uku, Daya sau huđu – Huđu, Daya sau biyar – Biyar	<u>Wakar Rubanyawa (2)</u> Biya sau daya – Biyu, Biya sau biyu - Huđu, Biya sau uku – Shida, Biya sau huđu – Takwas, Biya sau biyar – Goma
LEARN  15 minutes	1) Say: Today's revision will focus on two things: fractions, and addition and subtraction of whole numbers. 2) Say: Who can remind us what a fraction is? (Learners should say that a fraction is a portion of a whole). 3) Draw partially shaded boxes on the board. Ask learners to identify the boxes and write the fractions (they should write $\frac{1}{2}$ for the first and $\frac{1}{3}$ for the second). Make sure they explain their reasoning. 4) Say: Who can help us solve this addition problem? (If needed, remind learners how to carry a digit). 136 +228 	

	5) Say: Who can help us solve this subtraction problem? (If needed, remind learners how to borrow). 265 -127
	6) Demonstrate more addition and subtraction problems.
PRACTICE 20 minutes	Ask learners to solve the following problems in pairs: 30 +22 25 +76 200 +150 140 +238 254 +377 25 - 14 48 -29 500 -200 467 -248 392 - 135 Label these two shapes with the appropriate fraction:
WRITE 10 minutes	Ask learners to copy and solve the following in their notebooks: 45 +32 27 +86 200 -125 59 - 27 154 - 118
ASSESS 10 minutes	1) Ask learners to peer check their answers. 2) Ask learners to come to the board to write the answers. Ask them to explain their reasoning.
SUMMARIZE 5 minutes	Ask learners to practice the following problems at home: 31 +27 67 +56 130 - 80 45 - 17 195 - 218

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LESSON NUMBER 39.1: ASSESSMENT	
TOPIC	Assessment
OBJECTIVES	) Learners will take a math assessment
MATERIALS	) Paper and pencils for learners
INTRODUCTION	Explain to learners that they will take an exam. This exam will show what they have learnt. First, they should write their name on the top of a blank piece of paper. Write the following problems on the blackboard (or print these questions before class and distribute them).
MULTIPLICATION AND DIVISION	Solve the following multiplication and division problems 1. $5 \times 4 =$ 2. $7 \times 6 =$ 3. $6 \times 8 =$ 4. $2 \times 3 =$ 5. $24 \overline{)6} =$ 6. $36 \overline{)3} =$ 7. $15 \overline{)5} =$ 8. There are 6 eggs in a crate. How many eggs are in 5 crates? 9. An envelope can contain 6 books. How many envelopes do we need to pack 42 books? 10. There are 5 children and 15 masa cakes. How much masa should each child receive?

FRACTIONS	Shade the diagram to match the fraction: 11.  $\frac{2}{3}$ 12.  $\frac{1}{3}$ 13.  $\frac{1}{4}$
ADDITION OF NUMBERS UP TO 1000	14. $\begin{array}{r} 45 \\ +32 \\ \hline \end{array}$ 15. $\begin{array}{r} 355 \\ +234 \\ \hline \end{array}$ 16. $\begin{array}{r} 124 \\ +367 \\ \hline \end{array}$ 17. $\begin{array}{r} \text{N}550 \\ +\text{N}400 \\ \hline \end{array}$ 18. $\begin{array}{r} 68 \\ -24 \\ \hline \end{array}$ 19. $\begin{array}{r} 435 \\ -220 \\ \hline \end{array}$ 20. $\begin{array}{r} 861 \\ -354 \\ \hline \end{array}$

LESSON NUMBER 39.2: REVIEW AND REINFORCEMENT

TOPIC	Review
OBJECTIVES	) Identify learners' difficulties based on the test) Give learners reinforcement in the areas of need
MATERIALS	Prepare problem cards based on the areas of difficulty
REVIEW MATH PROBLEMS 20 minutes	1) Distribute learners' corrected test from the previous class. 2) Review and explain any problems that gave learners difficulty.
ADDITIONAL PRACTICE ACTIVITIES 35 minutes	) Identify learners who struggled on particular areas of the test.) Group the learners based on the challenges they face.) Assign an advanced learner to each group.) Give each group a card with problems based on their challenges.) Ask each group to solve the problems. Encourage the advanced learners to assist the beginners.) Go round to support each group as they work through the problems
CLOSING 5 minutes	) Ask learners to continue practicing the problems at home