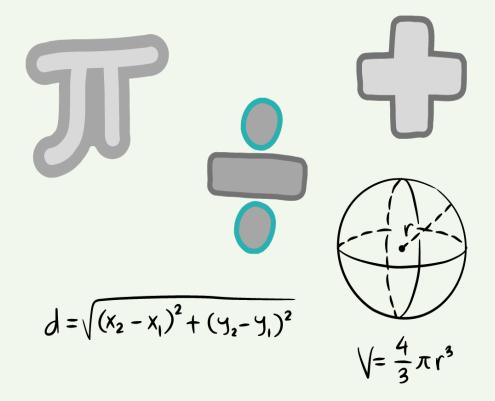
MathStep 1

(Revised/SNC Version)



Lesson Planner





Unit 1: Numbers to 10

Suggested Number of Lessons: 8 to 9

Lesson 1

Objective(s): Identify numbers 1 to 9 in figures and words

Match numbers 1 to 9 with objects

Match objects with one-to-one correspondence

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 9 written in figures and words

Introduction (5 min)

Discuss the opening page with the children. Ask them what place they can see in the picture. Ask them if they have been to a zoo. What animals did they see there? Allow them to share their experiences. Ask questions such as: How many elephants can you see? How many monkeys are there? etc. Observe whether or not children have prior knowledge of counting numbers 1 to 9.

Teaching procedure (20 min)

Use countable objects such as marbles, small balls, building blocks, leaves, etc. to practice counting objects up to 9 with the children. Associate the count with the numbers in figure. For example, count 1 leaf and write the number 1 in front of it. Count two books and write the number 2 in front of it. Do the same with the remaining numbers up to 9. Use flashcards to help children pronounce and recognise the figures and spelling of numbers 1 to 9.

Demonstrate one-to-one correspondence to the children. Place equal quantities of countable objects in groups on the table and ask children to match them e.g. one chalk with one duster, two pencils with two rulers, three balls with three blocks, etc.

Refer to page 8 in the textbook and reinforce counting. Ask them what is common about the objects shown on the pages. (They can all be found in their classroom.) Children should be able to count and recognise numbers from 1 to 9 by the end of the lesson.

Task (10 - 15 min)

Exercise 1,	Children should count the objects in each picture (on the right) and match
Question 1	them to the correct number (on the left). The first one is done for them. Ask
	them what is common about pictures. (They are all fruits.)

Exercise 1,	Children should be able to count and match sets having the same number of
Question 2	objects. The first one is done for them. Ask the children what is common
	about the pictures in the question. (They are all items that we wear.)

Objective(s): Identify the number zero (0)

Count backwards from 9 to 0

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 0 to 9 written in figures and words

Transparent container (plastic bag or glass jar)

Introduction (5 min)

Recap the numbers 1 to 9 with the children by conducting simple activities using tangible objects and flashcards.

Teaching procedure (20 min)

Bring a transparent (see-through) container to class. Put three balls into the container. Show the container to the class and say that it has three balls in it. Take one ball out and ask the class how many balls are in the container. Do the same until you have one ball left in the container. Take that one ball out and ask the class how many balls are in the container now? Elicit from the children that there are no more balls left in the container. Tell them that there are zero balls in the container and write the number 0 on the board. Repeat the activity using five stones. Reduce the quantity of stones one by one until there are no stones left. Emphasise that zero means nothing. Refer to the example page 11. Tell the children that there are no more biscuits left because Sara ate all of them.

Write numbers 0 to 9 on the board and count aloud with the children. Tell them this is forward counting. Then count from 9 to 0 and tell them that this is called backward counting. Practice a few times.

Task (7 to 8 min)

Ask the children to complete the activity on page 12. Tell them that they have to count backwards from 9 to 0. They have to draw arrows between the numbers to reach the end.

Homework

Ask children to complete Exercise 2, Question 1.

Objective(s): Read and write numbers 0 to 9 in figures and words

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Worksheets for tracing and writing numbers 0 to 9

Introduction (5 min)

Recap the numbers 0 to 9 with the children by conducting simple activities using tangible objects and flashcards. Also recap counting forwards and backwards.

Teaching procedure (30 min)

Guide children in writing numbers 0 to 9 in figures in their notebooks. Ask children to trace each figure with their fingers in the air. You can bring readymade printable worksheets and give to the children for practice or prepare pages in their notebooks for writing purposes.

Homework

Ask children to complete Exercise 2, Question 2.

Lesson 4

Objective(s): Matching numbers 0 to 9 with objects

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards for numbers 0 to 9

Introduction (5 min)

Recap the numbers 0 to 9 with the children by conducting simple activities using tangible objects and flashcards.

Teaching procedure (20 min)

Set up groups of countable items on a table such as two balls, three blocks, six marbles, eight pencils, etc. Place relevant flashcards nearby. Ask children to match the groups to the correct flashcard. Similarly draw groups of items on the board and ask children to count and then write the correct number next to the group.

Task (10 min)

Exercise 2, Question 3	Children should count each object in the pictures and then write the correct number in the boxes provided. The first one is done for them.
Exercise 2, Question 4	Children should count the number of each type of vehicle shown in the picture. Elicit from children that all the items shown in the picture help us to travel from one place to another.

Objective(s): Arrange numbers 0 to 9 in ascending and descending order

Teaching Resources: Diagram of a step ladder or a wall chart showing steps

Introduction (5 min)

Elicit from children if they have prior understanding of the terms ascending or descending order.

Teaching procedure (20 min)

Use a wall chart showing steps or draw a ladder on the board. Ask the children to count (1, 2, 3, ...) with you as you climb up from the first step of the ladder to the step at the top of the ladder. Ask them what was happening as you were climbing up. (The numbers were getting bigger.) Tell them they were ascending the steps – moving from low to high, small to big. So when numbers are arranged in an increasing order (small to big) it is called ascending order.

Now come down from the top step to the bottom step of the ladder counting backwards. Elicit from the children that as you were coming down, the numbers were becoming smaller. Tell them that they were descending the steps – moving from high to low, big to small. So when numbers are arranged in a decreasing order (big to small) it is called descending order.

Refer to the examples on page 20 for reinforcement and help children understand how to arrange numbers in ascending and descending order.

Task (10 min)

Exercise 3, Question 1	Children should be able to arrange the given sets of numbers in ascending order. The first one is done for them.
Exercise 3, Question 2	Children should be able to arrange the given sets of numbers in descending order. The first one is done for them.

Objective(s): Compare numbers 0 to 9

Compare two or more groups of objects in terms of numbers

Identify the number of objects in two groups to show

'more than' and 'less than'

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Worksheets for comparing numbers 0 to 9

Transparent containers such as glass bowls or jars, etc.

Introduction (5 min)

Recap the counting from 0 to 9 with the children and also arranging numbers in order.

Teaching procedure (20 min)

Place two transparent containers on the table. Put two balls in one container and five balls in the other. Ask the children to count the balls in each container. Ask them 'Which container has more balls?' Tell them that this means five is more than two. Repeat the activity with different numbers. This time ask them 'Which container has less balls?' You can also draw two circles on the board and label them A and B. Then draw four stars in one circle and seven stars in the other. Ask the children to compare the numbers and tell you which circle has more/less stars. Also ask the children by how much greater or less a a number is from the other.

Introduce the greater than (>) and less than (<) symbols to the children. Using the above examples, write on the board 5 > 3, 4 < 7, etc. Some children will find it difficult to remember the symbols. Ask the children to compare the symbols to a crocodile's mouth and tell them that the mouth always opens towards the larger number.

Refer to the examples in the textbook for reinforcement.

Task (12 - 14 min)

Exercise 4,	Children should be able to compare each set of objects by counting and
Question 1	writing the numbers in the boxes. They should then identify and tick the set
	that has more. The first one is done for them.
Exercise 4,	Children should be able to compare each set of objects by counting and
Question 2	writing the numbers in the boxes. They should then identify the set that has
	less. The first one is done for them.
Exercise 4,	Children should compare each pair of numbers and insert the symbol < of >
Question 5,	in the boxes. Attempt the left column.
left column	

Homework

Exercise 4, Question 3	Children should compare and circle the larger number from each given pair. The first one is done for them.
Exercise 4, Question 4	Children should compare and tick the smaller number from each given pair. The first one is done for them.
Exercise 4, Question 5, right column	Children should compare each pair of numbers and insert the symbol < of > in the boxes. Attempt the right column.

Lesson 7

Objective(s): Identify which number up to 9 comes before or after a given number

Identify which number up to 9 comes between two given numbers

Identify 10 as a 2-digit number

Identify and write missing numbers in a sequence from 1 to 10

Teaching Resources: Flashcards for numbers 0 to 9

Introduction (5 min)

Recall counting forwards and backwards between numbers 0 to 9.

Teaching procedure (20 min)

Write the following on the board:



Ask the children what number is **after** 3. Ask them what number is **before** 3. Similarly ask them what number is before 4, etc. Once children are able to understand the concept of before and after, ask them what number comes between 2 and 4. Discuss a few more examples on the board. You can also use tangible objects to further explain the concept of after, before and between. Refer to the examples in the textbook for reinforcement.

Write the number 9 on the board and ask the children what number comes after 9. Tell them that the number 10 comes after 9. 10 is one more than 9 and it is also the first 2-digit number.

Write a chain of 5 or 6 numbers in order on the board with some missing numbers. Ask the children to fill in the gaps by remembering the count sequence.

Task (10 min)

Exercise 5, Question 1	Children should identify and write the number that comes next in the boxes. The first one is done for them.
Exercise 5, Question 2	Children should identify and write the number that comes before in the boxes. The first one is done for them.

Homework

Exercise 5, Question 3	Children should identify the order and write what comes between each set of given numbers. The first one is done for them.
Exercise 5, Question 4	Children should be able to fill in the missing numbers in each chain. The first one is done for them.

Lesson 8

Objective(s): Read and write numbers up to 9 in figures and words

Teaching Resources: Flashcards for numbers 0 to 10 in figures and words

Introduction (5 min)

Recall counting numbers 0 to 10.

Teaching procedure (20 min)

By now the children are familiar with the numbers 0 to 10 in figures. Introduce the number names for 0 to 10 using flashcards. Write each number with its name on the board so that the children can also familiarize themselves with the number spellings. It will be difficult to learn all the spellings in one class so you can divide the lesson on to two days.

Task (10 min)

Ask the children to complete the writing activity on page 30 (one to five).

Exercise 6,	Children should count the objects in the pictures and match them to the
Question 1	correct number name. The first one has been done for them.

Objective(s): Read and write numbers up to 9 in figures and words

Teaching Resources: Flashcards for numbers 0 to 10 in figures and words

Introduction (5 min)

Recall counting number names 0 to 5.

Teaching procedure (20 min)

Continue with the number names from six to ten.

Task (10 min)

Ask the children to complete the writing activity on page 30 (six to ten).

Homework

Exercise 6, Question 2	There two sets of objects that match the number name. Children should count and match the sets to the number name correctly.
Exercise 6, Question 3	Children should count the objects and then write the correct number name in the lines provided. The first one is done for them.

Unit 2: Numbers to 100

Suggested Number of Lessons: 8 to 9

Lesson 1

Objective(s): Identify numbers up to 20 in figures and words

Match numbers with objects

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 20 written in figures and words

Introduction (5 min)

Discuss the opening page with the children. Ask them what place they can see in the picture. Ask them how often they go to a supermarket or grocery store with their parents. Allow them to share their experiences.

Teaching procedure (20 min)

Revise counting from 0 to 10 with the children. Bring 20 countable items such as buttons, beads, blocks, etc. to class. Begin with introducing the number eleven to the children. Show them a group of 10 blocks and then place one more and say 'ten and one make eleven'. This methodology will later help in building the concept of tens and ones in the children. Use the same strategy for the numbers 12 to 20. For twenty say 'ten and ten make twenty'.

Refer to the numbers 11 to 20 in the textbook for reinforcement. Ask the children to look at the numbers in words and learn the spellings for use later. Children should be able to count and recognise numbers from 1 to 20 by the end of the lesson.

Task (10 – 15 min)

Exercise 1,	Children should count the objects in each picture (on the right) and match
Question 1	them to the correct number (on the left). The first one is done for them.

Objective(s): Identify and write numbers up to 20 in figures and words

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 20 written in figures and words

Introduction (5 min)

Recap the numbers 11 to 20 with the children by conducting simple activities using tangible objects and flashcards.

Teaching procedure (20 min)

Call three children to the front of the class. Give each child a set of 13 buttons. Now ask each to count and tell you the quantity. Observe what strategy each child uses. Introduce the making-ten-first method to the children. Ask them to first group the objects in 10 and then count on the remaining to find the total. Repeat the activity with numbers like 15, 18, 19 and so on.

Refer to the examples on page 37 of the textbook for reinforcement.

Task (7 to 8 min)

Exercise 1,	Children should count the objects in each picture and circle a set of ten
Question 2	objects. They should then count the remaining and write the answer in the
	boxes. The first one is done for them.

Homework

Ask children to complete Exercise 1, Question 3. Children should practice writing numbers 11 to 20 in figures (numerals). You can also give them extra practice in their homework copies.

Objective(s): Read and write numbers 11 to 20 in figures and words

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Recap the numbers 1 o 20 with the children by conducting simple activities using tangible objects and flashcards.

Teaching procedure (20 min)

Introduce the number names for 11 to 20 using flashcards. Write each number with its name on the board so that the children can also familiarize themselves with the number spellings. It will be difficult to learn all the spellings in one class so you can divide the lesson on to two days.

Task (7 to 8 min)

Exercise 2,	Children should count the objects in each picture and match them to the
Question 1	correct number name. The first one is done for them.

Homework

Ask children to complete Exercise 2, Question 2. You can give extra writing practice to the children in their homework copies.

Objective(s): Recognise and identify the place value of a specific digit in a 2-digit number

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Revise counting from 0 to 20 with the children. Use the words '10 and 2 make 12' and so on up to '10 and 10 make 20'.

Teaching procedure (20 min)

Bring base ten blocks to class. Begin with introducing the number twenty-one to the children. Show them two groups of 10 blocks and then place one more and say 'ten and ten make 20, twenty and one make twenty-one'. Also introduce the place value tens and ones. Tell them 10 ones make 1 ten, so it means 2 tens will have 20 ones, 3 tens will have 30 ones and so on. Use the same strategy for the numbers 22 to 30. Once children are familiar with the figures, introduce the number spellings. Carry out a similar strategy for numbers 31 to 40. Use base ten blocks as these help to build the concept of tens and ones.

Refer to the examples 1 to 6 in the textbook for reinforcement. Ask the children to look at the numbers in words and learn the spellings.

Task (10 min)

Give simple practice questions on tens and ones to the children in class. Ask them to revise the same for homework.

Objective(s): Recognise and identify the place value of a specific digit in a 2-digit number

Decompose a number up to 99 to identify the value of a number in ten's and one's place.

Count in tens and recognize 100 as a 3 - digit numbers.

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

Introduction (5 min)

Revise the concept of tens and ones and recall counting from 1 to 40.

Teaching procedure (20 min)

Bring base ten blocks to class. Continue implementing the concept of tens and ones when dealing with numbers 41 to 100. Once children are familiar with the figures, introduce the number spellings.

Refer to the examples 7 to 12 in the textbook for reinforcement. Ask the children to look at the numbers in words and learn the spellings.

Write a 53 on the board. Ask children to tell you how many tens and ones are there in the number. Discuss a few more examples.

Ask them what number comes after 99. Yes, it is one hundred. Tell them that 100 is I more than 99 and also that 100 is the first 3-digit number. Refer to page 56 for reinforcement.

Task (10 min)

Exercise 1, Question 1	Children should count the objects and write the correct number in the boxes.
Exercise 1, Question 2	Children should be able to write the tens and ones in each number.

Exercise 1,	Children should in tens and ones and write the correct numbers in each box.
Question 3	

Objective(s): Counting forwards and backwards up to 99

Order a set of numbers from 0 to 99 in ascending and descending order

Compare 1-digit and 2-digit numbers

Teaching Resources: Wall chart of numbers 1 to 100

Introduction (5 min)

Recall ascending and descending order with the children. Write a few numbers on the board and ask the children to arrange them in ascending/descending order.

Teaching procedure (20 min)

Use a wall chart showing numbers 1 to 100. Ask the children to count (1, 2, 3, ...) with you and ask them to notice that the numbers are getting larger. Tell them that when numbers are arranged in an increasing order (small to big) it is called ascending order. Now count from 99 backwards and tell them that when numbers are arranged in a decreasing order (big to small) it is called descending order.

Refer to the examples on page 62 for reinforcement and help children understand how to arrange numbers in ascending and descending order.

Write the numbers 21 and 46 on the board. Ask the children to tell you which number is greater and which is smaller. Recall the greater than (>) and the smaller than (<) symbols with the children.

Task (10 min)

Exercise 2, Question 1	Children should identify and circle the smallest number in each group. The first one is done for them.
Exercise 2, Question 5	Children should arrange each set of numbers in descending order. The first one is done for them.

Exercise 2, Question 2	Children should identify and colour the biggest number in each group. The first one is done for them.
Exercise 2, Question 4	Children should arrange each set of numbers in ascending order. The first one is done for them.

Objective(s): Compare 1-digit and 2-digit numbers

Compare two or more groups of objects in terms of numbers

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Recap the numbers up to 9 with the children and also arranging numbers in order.

Teaching procedure (20 min)

Write the following on the board:



Revise the concept of before, after and between with the children. Ask them what number comes after 20? What number comes before 21? etc.

Write a few numbers in a sequence on the board such as 19, 20, 21, ____, 23, 24, ____, 26. Ask the children to fill in the missing numbers with you. Give a few more examples with skipping numbers by twos, threes, fives, tens, etc.

Task (10 min)

Exercise 4,	Children should be able to identify the numbers accordingly and fill in the
Question 1	boxes.

Exercise 2,	Children should fill in the missing numbers. The first one is done for them.
Question 7	

Objective(s): Identify the position of objects using ordinal numbers such as first, second ...,

tenth, including representations 1st, 2nd, ... 10th through pictures

Teaching Resources: Flashcards for ordinal numbers 1st to 10th

Introduction (5 min)

Ask the children if they have they participated in races. What happens in a race or competition? Allow them to share their experiences.

Tell the children that the positions in a race or competition are termed as ordinal numbers.

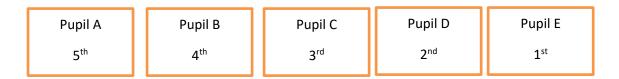
Teaching procedure (20 min)

Introduce children to the positions 1st to 10th. Make placards labelled 1st to 5th and bring them to class. Call 5 pupils to the front of the class and arrange them in a line. Give each one a placard in the order in which they are standing. Ask the children to name their positions.

Pupil A	Pupil B	Pupil C	Pupil D	Pupil E
1 st	2 nd	3 rd	4 th	5 th

Refer to the picture on page 127 of the textbook. Ask them if they have ever been to a food stall. Do they stand in a queue (line) and wait their turn? Read aloud the positions to the class and ask the children to repeat. Children should be able to identify the positions independently. Write the numbers 1st, 2nd, 3rd, etc. and their names on the board.

Rearrange the placards such that the first pupil becomes the last pupil.



Tell the children that in order to know the correct position they should know where to start from. Carry out a similar activity with 10 children.

Task (10 min)

Exercise 1,	Children should look at the objects and identify where the first object is.
Question 1	They should then count and reach the position asked for and tick the correct
	answer. The first one is done for them.

Exercise 1, Children should observe the picture and fill in the position of each child in Question 2 the race. At the end they should write the position of the last child which is sixth.

Unit 3: Addition

Suggested Number of Lessons: 7 to 8

Lesson 1

Compare numbers from 1 to 20 to identify "how much more" one is from Objective(s):

another.

Recognise and use the symbol for addition '+' and equality '='

Add two 1-digit numbers that sum up to 10 by counting on.

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 20 written in figures and words

Introduction (5 min)

Discuss the opening page with the children. Ask them about their visits to supermarkets or grocery stores. Allow them to share their experiences.

Ask the children to count the items on the shelves. Ask questions such as: How many packets of sugar can you see on the shelf? How many packets of flour/rice are there on the shelf? Refer to the items that are in the lady's shopping basket. Observe from their responses whether they can count. Refer to the questions being asked on the page. Ask the children to count and tell you the total. Lead the class on to the concept of addition.

Teaching procedure (20 min)

Take seven marbles and place them on the desk as shown in the picture below:





Ask the children to start counting from the left: 1, 2, ... 5, now continue with the remaining two marbles as 6, 7. Say the number 7 out loud and repeat that there are 7 marbles altogether. Tell the children that they have added the marbles by counting on.

Draw their attention towards the mathematical sentence. Tell them that the '+' sign is used for addition and the '=' sign stands for 'equals to' and we always write the result of addition after it. Refer to examples 1 to 3 and ask the children to count and add. Tell them when we write 5 + 2 = 7, it is called an addition sentence.

Use the same sentence and ask how much more than 5 is 7. The children should be able to tell you that 7 is two more than 5. Refer to the examples in the textbook for reinforcement.

Recall the concept of zero with the children. Ask them what they think would happen if they added zero to a number. Emphasise that since zero means nothing, adding zero to any number does not change it. Refer to example 4 for reinforcement.

Task (10 min)

Exercise 1,	Children should count the objects in each picture and write in the boxes.
Question 1	They should then add by counting on and write the total in the boxes on the
	right. The first one is done for them.
	Ask them what is common about the objects shown in the question. (They
	are all vegetables.)

Exercise 1,	Children should look at the addition sentence and then draw dots
Question 2	accordingly in the respective empty boxes. They should then add and write
	the total in each answer box. The first one is done for them. You can also
	demonstrate part (b) on the board.

Objective(s): Add two 1-digit numbers that sum up to 10 vertically

Recognize the use of symbol to represent an unknown such as 2 + 4=7, 3+

4=?, 4 + ? = 7

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Recap addition of numbers by counting on.

Teaching procedure (20 min)

Use common objects to reinforce the concept of addition of two 1-digit numbers. Introduce vertical addition to the children using a few examples such as 2 add 3, 5 add 1, etc. Encourage children to use their fingers to add the numbers. Tell them that adding vertically is just another way of adding numbers. Refer to the examples on page 73 and ask the children to fill in the boxes accordingly.

Task (10 – 12 min min)

Exercise 2,	Children should be able to solve the vertical addition sums easily. Solve two
Question 1	or three sums on the board and then ask them to solve the rest on their
	own. The first one is done for them.

Exercise 2,	Children should look at the pictures and complete the addition sentences.
Question 2	The first one is done for them.

Objective(s): Construct addition sentence from given number stories.

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Recap addition of 1-digit numbers.

Teaching procedure (20 min)

Choose two pupils. Give 4 blocks to one pupil and give 3 blocks to the other pupil. Say out loud to the class:

Pupil (Name of pupil A) has 4 blocks. Pupil (Name of pupil B) gives 3 blocks to Pupil (Name of pupil A). How many blocks does Pupil (Name of pupil A) have altogether?

Ask the children to count, add and tell you the total. Share a few more examples with the class with other objects. Refer to the examples in the book and discuss each number story with the children. Emphasise the use of term 'altogether' means that they are being asked to find the total or sum.

Task (10 min)

Exercise 3,	Ask the children to read the number stories. Ensure that they understand the
Question 1	stories. Children should be able to count the objects and write the numbers in
and 2	the boxes. Then they should add and complete each number sentence.

Homework

Ask children to complete Exercise 3, Questions 3 and 4.

Objective(s): Add a 2-digit number to a 1-digit number without carry

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

Introduction (5 min)

Revise adding 1-digit numbers by counting on.

Teaching procedure (20 min)

Place a set of 8 and a set of 3 blocks on the table for the children to see. Ask them how many blocks are on the table altogether? First introduce the counting on method and ask the children to count on from the first number. In this case the children will count on 3 from 8 to get 11. Give a few more examples.

Now show them a group of 12 blocks and another group of 6 blocks. Once again ask them to count on from the first number and tell you the total. Count aloud with them. Similarly try different combinations such as 22 and 4, 46 and 3, etc. Ensure that the examples involve adding a 1-digit number to a 2-digit number without carry over.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Give simple practice questions to the children.

Objective(s): Add a 2-digit number to a 1-digit number without carry

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

blocks.

Introduction (5 min)

Revise adding 1-digit and 2-digit numbers with the children by counting on method.

Teaching procedure (20 min)

Now that children are comfortable using the counting on method, introduce the place value method to add numbers. Make groups of 10 using the base-10 blocks. Write 22 + 5 on the board. Show 22 using two sets of 10 and two ones. Place 5 blocks below the ones. Tell them to always add the ones first and then add the tens.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 4,	Children should count the tens and ones and write them in the boxes. Then
Question 2	they should add and write the correct answer. The first one is done for them.

Exercise 4,	Children should add the given numbers using whichever method they are
Question 1	comfortable with. The first one is done for them.

Objective(s): Add a 2-digit number to 10s

Add two 2-digit numbers without carry

Teaching Resources: Base-10 blocks

Introduction (5 min)

Revise adding 1-digit and 2-digit numbers with the children.

Teaching procedure (20 min)

Introduce 2-digit addition to children. Begin with counting in tens. Elaborate that adding 20 means adding 2 tens or counting on 2 tens from the given number. Write the statement 16 + 30 on the board. Encourage them to add in tens – 16 add 3 tens becomes 26, 36, 46. So the answer is 46.

Refer to the examples in the textbook for reinforcement.

Write the following statement on the board: 23 + 11. Ask the children to identify the tens and ones in each number. Tell them when we add, always add the ones first and then the tens.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 5,	Children should add the given numbers using whichever method they are
Question 1	comfortable with. The first one is done for them.

Exercise 5,	Children should count the tens and ones and write them in the boxes. Then
Question 2	they should add and write the correct answer. The first one is done for them.

Objective(s): Construct addition sentence from given number stories

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

Introduction (5 min)

Recap addition of 1-digit to 1-digit, 1-digit to 2-digit and 2-digit to 2-digit numbers with the children.

Teaching procedure (20 min)

Write the following story on the board: Ali has 12 marbles, he gets 7 more. How many does he have altogether?

Encourage children to use the counting on or the tens and ones method to add the numbers.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 6,	Ask the children to read the number stories. Ensure that they understand
Question 1	the stories. Children should be able identify the operation required to solve
and 2	the problems. They can apply any method they are comfortable with.

Homework

Ask the children to complete Exercise 6, Questions 3 and 4 for homework.

Unit 4: Subtraction

Suggested Number of Lessons: 8 to 9

Lesson 1

Objective(s):

- Compare numbers from 1- 20 and find "how many less".
- Recognise subtraction as a difference and take away, and use the symbol "-".
- Subtract two 1-digit numbers by take away

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 20 written in figures and words

Introduction (5 min)

Discuss the opening page with the children. Ask children what they think about having lunches and dinner with their families. How do they feel? What do they observe?

Ask the children to count the items on the tables. Ask questions such as: How many rotis are there in the basket? How many rotis are in the father's plate? How many chicken drumsticks are in the tray? Observe from their responses whether they can count. Refer to the questions being asked on the page. Ask the children to count and tell you the difference. Lead the class on to the concept of subtraction.

Teaching procedure (20 min)

Take seven marbles and place them on the desk as shown in the picture below:



Ask the children to start counting from the left: 1, 2... and tell you the total. Say 'Yes, there are seven marbles.' Now remove 2 marbles and say 'What happens when I take away 2 marbles? Can you count and tell how many marbles are left?' Lay emphasis on the terms 'take away' and 'how many left'. These are keywords that will help children recognise later what operation is required.

Write the mathematical sentence 7 - 2 = 5 on the board. Draw their attention towards the sentence. Tell them that the '-' sign is used for subtraction and the '=' sign stands for 'equals to' and we always write the result of subtraction after it. Refer to examples 1 to 3 in the textbook and ask the children to count and subtract. Tell them when we write 7 - 2 = 5, it is called a subtraction sentence.

Use the same sentence and ask how much less than 7 is 5. The children should be able to tell you that 5 is two less than 7. Refer to the examples in the textbook for reinforcement.

Recall the concept of zero with the children. Ask them what they think would happen if they subtracted zero from a number. Emphasise that since zero means nothing, subtracting zero from any number does not change it. Refer to example 4 for reinforcement.

Task (10 min)

Exercise 1,	Children should count the objects in each picture and write in the boxes.
Question 1	They should then subtract and write the total in the boxes on the right. The
	first one is done for them.

Exercise 1,	Children should look at the subtraction sentence and then cross out the
Question 2	respective items in each case. They should then write the difference in each
	answer box. The first one is done for them. You can also demonstrate part
	(b) on the board.

Objective(s):

Subtract two 1-digit numbers by counting back

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Flashcards with the numbers 1 to 20 written in figures and words

Introduction (5 min)

Recall subtraction by taking away with the children.

Teaching Procedures (20 min)

Recall backward counting with the children before discussing this topic.

Draw 6 balls on the board. Ask the children to count them. Write the following sentence on the board below the balls.

Now point at the last ball on the board and ask the children to count back two. The class should count back two places from 6 and land at the number 4. Tell the children that they have subtracted 2 from 6 by counting back. Discuss a few more examples in a similar manner. Refer to the examples in the textbook for reinforcement. Ask the children to observe the term 'how many left' which indicates that subtraction is involved.

Task (10 min)

Exercise 2,	Children should count the objects in each picture. They should then subtract
Question 1	by counting back and write the answer in the box. The first one is done for
	them.

Exercise 2,	Children should first count the objects and write the total in the box. They
Question 2	should then subtract the stated number and write the difference in the
	answer box. The first one is done for them.

Objective(s): Subtract two 1-digit numbers vertically

Recognise the use of symbol to represent an unknown such

as 9-2 = 7, 9-7=2.

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc.

Introduction (5 min)

Recap subtraction of numbers by counting back/taking away.

Teaching procedure (15 min)

Use common objects to reinforce the concept of subtraction of two 1-digit numbers. Introduce vertical subtraction to the children using a few examples such as 7 take away 3, 8 take away 2, etc. Encourage children to use their fingers to subtract the numbers. Tell them that subtracting vertically is just another way of subtracting numbers. Refer to the examples on page 104 and ask the children to fill in the boxes accordingly.

Task (10 – 12 min min)

Exercise 3,	Children should be able to solve the vertical subtraction sums easily. The
Question 1	first one is done for them.
parts (a) to (f)	

Exercise 3,	Children should be able to solve the vertical sums.
Question 1	
parts (g) to (I)	

Objective(s): Construct subtraction sentence from given number stories.

Teaching Resources: Countable items such as balls, blocks, sticks, pencils, etc. Introduction (5 min)

Recap subtraction of 1-digit numbers.

Teaching procedure (20 min)

Bring different coloured Lego blocks to the class. Call a pupil to the front of the class. Give 7 blocks to the pupil. Say out loud to the class:

Pupil (Name of pupil A) has 7 blocks. He gives 2 blocks to me. How many blocks does he have left?

Ask the children to do the calculation and tell you the answer. If need be, discuss the example on the board. Share a few more examples with the class with readily available objects. Refer to the examples in the book and discuss each number story with the children. Emphasise the use of term 'how many left' means that they are being asked to find the difference.

Task (10 min)

Exercise 4,	Ask the children to read the number stories. Ensure that they understand the
Question 1	stories. Children should be able to count the objects and complete the
and 2	mathematical sentence. Then they should subtract and complete each
	number sentence.

Homework

Ask children to complete Exercise 4, Questions 3 and 4.

Objective(s): Subtract a 1-digit number from a 2-digit number without borrowing **Teaching Resources:** Base-10 blocks or countable items such as balls, blocks, etc. Introduction (5 min)

Revise subtracting 1-digit numbers by counting back/take away.

Teaching procedure (20 min)

Bring base ten blocks to class. Place a set of 13 blocks on the table for the children to see. Ask them to subtract 5 blocks by counting back. In this case the children will count back 5 from 13 to get 8. Give a few more examples.

Now show them a group of 19 blocks and take away 4 blocks. Once again ask them to count back from the given number and tell you the result. Count aloud with them. Similarly try different combinations such as 35 take away 4, 47 take away 6, etc. Ensure that the examples involve subtracting a 1-digit number from a 2-digit number without borrowing.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Give simple practice questions to the children.

Objective(s): Subtract a 1-digit number from a 2-digit number without carry

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

Introduction (5 min)

Revise subtracting 1-digit and 2-digit numbers with the children. Also revise the concepts of tens and ones.

Teaching procedure (20 min)

Now that children are comfortable in subtracting, introduce the place value method to subtract numbers. Make groups of 10 using the base-10 blocks. Write 25 – 3 on the board. Show 25 using two sets of 10 and five ones. Place 3 blocks below the ones. Tell them to always subtract the ones first and then subtract the tens.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 5,	Children should count the tens and ones and write them in the boxes. Then
Question 2	they should subtract and write the correct answer. The first one is done for
	them.

Exercise 5,	Children should subtract the given numbers using whichever method they
Question 1	are comfortable with. The first one is done for them.

Objective(s): Subtract 10s from a 2-digit number

Subtract two 2-digit numbers without borrowing

Teaching Resources: Base-10 blocks

Introduction (5 min)

Revise subtracting 1-digit and 2-digit numbers with the children.

Teaching procedure (20 min)

Introduce 2-digit subtraction to children. Begin with counting in tens. Elaborate that subtracting 20 means subtracting 2 tens or counting back 2 tens from the given number. Write the statement 48 – 20 on the board. Encourage them to subtract in tens – 48 subtract 2 tens becomes 38, 28. So the answer is 28.

Refer to the examples in the textbook for reinforcement.

Write the following statement on the board: 35 - 11. Ask the children to identify the tens and ones in each number. Tell them when we subtract, always subtract the ones first and then the tens.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 6,	Children should subtract the given numbers using whichever method they
Question 1	are comfortable with. The first one is done for them.

Exercise 6,	Children should count the tens and ones and write them in the boxes. Then
Question 2	they should subtract and write the correct answer. The first one is done for
	them.

Objective(s): Construct subtraction sentence from given number stories

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

blocks

Introduction (5 min)

Recap subtraction of 1-digit and 2-digit numbers with the children.

Teaching procedure (20 min)

Write the following story on the board: Ali has 16 marbles, he gives 4 to his sister. How many does he have left?

Encourage children to use the counting back/take away or the tens and ones method to subtract the numbers.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Examples,	Ask the children to read the number stories. Ensure that they understand
Question 3	the stories. Children should be able identify the operation required to solve
and 4	the problems. They can apply any method they are comfortable with.

Homework

Ask the children to complete Exercise 7 for homework.

Unit 5: Measurements

Suggested Number of Lessons: 4 to 5

Lesson 1

Objective(s): Compare lengths – long, longer, longest, short, shorter, shortest

Teaching Resources: Ribbons, sticks, strings, objects of different lengths

Introduction (5 min)

Discuss the picture with the children and ask them what they can see. Ask them what the children are doing in the picture. Conclude that the children are trying to measure the items.

Teaching procedure (20 min)

Show a set of ribbons to the class – one short and one long. Introduce the concept of long and short to the children using the objects. Repeat the activity using a long and short stick, a long and short string, long and short ruler, etc.

Refer to the examples in the textbook for reinforcement.

Show three pieces of ropes to the class. Each piece should be of a different length. Introduce the concept of longer, shorter, longest and shortest to the class by comparing the lengths of the ropes. Ask the children to look at the size of the ropes and tell you which is the shortest/longest and so on. Tell them that longer/shorter is used when we are comparing two items.

Refer to the examples in the textbook for reinforcement.

Task (10 – 15 min)

Exercise 1, Question 2	Children should circle the item that is short in each set.
Exercise 1, Question 3	Children should compare the lengths of the benches and circle the answers accordingly.

Homework

Ask children to complete Exercise 1, Question 1. Children should colour the item that is long in each set.

Objective(s): Compare length – tall, taller, tallest

Teaching Resources: stack of blocks, etc.

Introduction (5 min)

Elicit if children are familiar with the terms tall and short.

Teaching procedure (20 min)

Call a tall and a short child to the front of the class to demonstrate the use of the terms. You can also use sets of blocks. Make a tower of 12 blocks and another tower of 5 blocks. Ask the children to tell you which is tall and which is short. Repeat the activity using other items.

Refer to the examples in the textbook for reinforcement.

Create three towers of different heights using blocks. Use the terms taller, shorter, tallest and shortest to describe the heights of the towers to the children. Ask the children to identify the tallest and the shortest tower. Tell them that taller/shorter is used when we are comparing two items.

Refer to the examples in the textbook for reinforcement.

Task (7 to 8 min)

Exercise 2, Question 1	Children should circle the item that is short in each set.
Exercise 2, Question 3	Children should observe heights of the plants in the picture and answer the questions.

Homework

Ask children to complete Exercise 2, Question 2. Children should look at each picture and draw a taller one beside each one.

Objective(s): Compare heights – high, higher, highest

Teaching Resources: Stacks of blocks, book, stapler, duster, chalk, etc.

Introduction (5 min)

Elicit if the children are familiar with the terms high and low.

Teaching procedure (20 min)

Take a book and stapler. Place the book on the table and place the stapler on a chair. Explain to the children that when things are at a height we say that they are higher up. The stapler on the chair is low and the book is high. Hold both the items in your hand. Raise one item up and hold it high. Hole the second item near your waist. Ask the children which item is high and which is low.

Compare three items placed at different heights. Tell them that the term higher/lower is used when we are comparing two items. Ask children to identify the object that is the highest/lowest.

Refer to the examples in the textbook for reinforcement.

Task (7 to 8 min)

Exercise 3,	Children should tick the object that is high in each picture.
Question 1	

Homework

Ask children to complete Exercise 3, Question 2. Children should compare the positions of the girls and answer the questions.

Objective(s): Compare mass – heavy and light

Teaching Resources: objects of different masses – ball, bag, book, stapler, eraser, chalk,

etc.

Introduction (5 min)

Ask questions such as, have you ever measured anything? Have you seen your parents or other people measure anything? Talk about terms like heavy and light and ask them if they have heard them before. What do they understand from it?

Teaching procedure (20 min)

Ask the children to lift a book and then lift a pencil. Which object feels heavy? Which object feels light? Ask them to pick up a few more items and find out for themselves which items feel heavy and which feel light.

Refer to the examples in the textbook to reinforce the concept.

Now give them three items such as a stapler, a dictionary and a marker. Use the terms such as 'heavier', 'heaviest', 'lighter' and 'lightest' to help describe the items. Tell them that the term heavier/lighter is used when we are comparing two items.

Refer to the examples in the textbook for reinforcement.

Task (10 min)

Exercise 4, Question 1	Children should circle the object that is heavy in each picture.
Exercise 4, Question 2	Children should tick the object that is light in each picture.

Homework

Ask children to complete Exercise 4, Question 3. Children should compare the objects in each picture and then circle the correct answer. The first one is done for them.

Unit 6: Money

Suggested Number of Lessons: 3 to 4

Lesson 1

Objective(s): Identify Pakistani currency coins and notes

Teaching Resources: Paper play coins of denomination Re 1, Rs 2 and Rs 5, paper play notes of denominations Rs 10, Rs 20, Rs 50 and Rs 100.

Introduction (5 min)

Discuss the opening page with the children. Ask questions such as, Have you bought things at a shop? How are the items presented at the counters? Do you get the things for free or do you have to pay for it? Who is a shopkeeper? What do you give to the shopkeeper once you select an item to buy? Allow them to share their experiences.

Teaching procedure (20 min)

Use the paper play notes and coins to introduce Pakistani currency to the children. You can also use real notes and coins to familiarise children if possible. Allow them to feel the coins and make observations about their shapes and sizes. Ask them to notice the colour of the notes with respect to the denomination.

Give children a set of coins and notes and ask them to count the money. Encourage them to use the counting on technique to count money as it is the easiest method. Give a child Rs 24 in the form of one Rs 10 note, two Rs 5 coins and four Re 1 coins. Now ask him/her to count and tell you how much money they have.

Refer to the examples in the textbook for reinforcement.

Exercise 1,	Children should look at the notes and coins carefully. They should count the
Question 1	amount of money and write them in the boxes. The first one is done for
	them.

Objective(s): Match a group of coins/notes to an equivalent group of different denominations

Teaching Resources: Paper play coins of denomination Re 1, Rs 2 and Rs 5, paper play notes of denominations Rs 10, Rs 20, Rs 50 and Rs 100.

Introduction (5 min)

Recap counting of money.

Teaching procedure (20 min)

Call two or three pupils to the front of the class. Give some Re 1 and Rs 2 coins to each of them. Now give them a Rs 10 note and ask them to make the equivalent amount using the coins. Check to see if they have made correct sets. Repeat the activity with a Rs 20 note. For Rs 50 and Rs 100, ask children to make combinations with Rs 10 and Rs 20 notes.

Refer to the examples in the textbook for reinforcement.

Task (7 to 8 min)

Exercise 2,	Children should count the money and match equivalent sets with each
Question 1	other. The first one is done for them.

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Objective(s):

- Add and subtract money using the prices of objects (transaction of toys, etc.)
- Recognise money change (up to 100) to its equivalent denominations
- Determine if enough money is available to make a purchase
- Add different combinations of coins/notes to make a sum up to 100.

Teaching Resources: Paper play coins of denomination Re 1, Rs 2 and Rs 5, paper play notes of denominations Rs 10, Rs 20, Rs 50 and Rs 100.

Introduction (5 min)

Recap counting of money and recognition of denominations.

Teaching procedure (20 min)

Play shopping with the children. Bring some items such as packets of chips, juices, biscuits, stationery items, etc. to class. Add price tags to each item and display them on the desk or a shelf. Give play notes to the children and ask them to buy items using only the money they have. Encourage them to select two or three items and then add the amount to get the total. Then check if they have enough money to buy those items. If yes, ask them to calculate how much money they will get back. Tell them that this amount is called a 'change'. Similarly if they are short of money, how much more do they need to buy the item(s).

Refer to the examples in the textbook for reinforcement.

Task (7 to 8 min)

Examples 2	Children should be able to calculate and write the correct answer.
to 6	

Homework

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

Unit 7: Time

Suggested Number of Lessons: 6 to 7

Lesson 1

Objective(s):

- Recognise the hour and minute hands of an analogue clock
- Read and tell time in hours from an analogue clock e.g. 2 o'clock

Teaching Resources: Analogue clock, chart paper, pins, markers, coloured pencils **Introduction (10 min)**

Discuss the opening page with the children. Ask the children to share their observations with the class. Ask questions such as, what time do you reach school? Have you ever missed an assembly? What time do you have lunch/dinner? What time do you play? Elicit if children are familiar with the concept of time.

Ask the children about their daily routine. What time do they get up? What time do they do their homework or play? Can they read the time on the clock? Lead the class on to the concept of telling time.

Teaching procedure (15 min)

Bring a large analogue clock to the class and show the minute hand and the hour hand to the children. Show them that there are 12 numbers on the clock that tell us the time. Show them the direction in which the hands of the clock move. Tell them that when the minute hand completes one whole cycle, the hour hand moves from one number to the other.

Explain the concept of o'clock to the class. Draw a clock on the board and show different times. Ask the children to tell you the time.

Refer to the examples in the textbook for reinforcement.

Task (15 min)

Conduct a clock making activity. Allow the children to work in groups. Help them cut out large circles from chart paper and label the numbers 1 to 12 on them. Use chart paper to make minute and hour hands and then use a pin to secure the hands in the middle of the clock. Children can colour and decorate their clocks. Ask them to bring the clock every day to school while the current chapter is in progress.

Objective(s):

Read and tell time in hours from a digital clock

Teaching Resources: Analogue clock, digital clock, paper clocks made by children Introduction (10 min)

Write the following times on the board: 3 o'clock, 7 o'clock, 10 o'clock, 12 o'clock. Ask the children to use the paper clocks they made in the previous class to show you the times.

Teaching procedure (20 min)

Show the analogue clock to the children. Then show the digital clock to the children. Ask them what difference they can see. Ask them to observe the digital clock and tell you where they have seen time written in this style. They may tell you they have seen it on mobile phones, tablet PCs or digital watches. Explain to them that the first number shows the hours and the next number shows the minutes. Revise the concept of o'clock with the children using the digital clock.

Refer to the examples in the textbook for reinforcement.

Use examples 4 to 6 to introduce the concept of morning, afternoon and evening to the children. Ask them what activities they do at these times.

Task (7 to 8 min)

Exercise 1,	Children should match the time to the correct clock. The first one is done for
Question 1	them.

Homework

Ask children to complete Exercise 1, Question 2.

Objective(s):

Draw hands on a clock

Teaching Resources: Analogue clock, digital clock, paper clocks made by children Introduction (5 min)

Recall telling time in o'clock with the children.

Teaching procedure (20 min)

Draw a clock on the board. Draw the minute hand at 12. Write the following times on the board: 2 o'clock, 5 o'clock and 9 o'clock. Call a pupil to the board and ask him/her to draw the hour hand on the clock to show the correct time. Repeat the activity with two more children. Give a few more examples.

Exercise 1,	Ask the children to read the time and then draw the hour hand in the clocks.
Question 3	The first one is done for them.

Objective(s):

- Name the days of the week in order
- Identify which day comes after/before a particular day.

Teaching Resources: School timetable showing days of the week, calendar Introduction (5 min)

Show the school timetable to the class. Ask them on which day they have sports. Ask them how many days do they come to school. Elicit from children if they are familiar with the days of the week.

Teaching procedure (20 min)

Continue your observation and ask children on which days they do not come to school. Help them differentiate between weekdays and weekend. What are their activities over the weekend?

Introduce the days of the week to the class and help them read the names properly. Tell them that there are seven days in one week. Ensure that the children know the order of the days correctly.

Refer to the textbook for reinforcement.

Exercise 2,	Children should recall the order of the days in a week and complete the
Question 1	exercise. The first one is done for them.

Objective(s):

Name (orally) the solar months of the year

Teaching Resources: solar calendar

Introduction (5 min)

Bring and display a solar calendar in the class. Ask the children if they have seen a calendar in their homes. What is it used for? Tell them that a calendar tells us the date of a particular day.

Teaching procedure (20 min)

Recall the days and week concept that were discussed in earlier classes. Tell them that weeks make up a month and months make up a year. There are 12 months in one year. Introduce the names of the months to the children and help to read them easily. Ask them on what date do they celebrate their birthdays. Ask questions such as whose birthday comes in the month of October/January/June?

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 3,	Children should recall the order of the months in a year and complete
Question 1	the exercise. The first one is done for them.

Homework

Ask children to complete Exercise 3, Question 2.

Objective(s):

Name (orally) the Islamic months of the year

Teaching Resources: lunar calendar

Introduction (5 min)

Bring and display a lunar calendar in the class. Ask the children if they have seen a calendar in their homes. Ask the children if they are familiar with the Islamic months.

Teaching procedure (20 min)

Introduce the months of the Islamic calendar to the children. Tell them that the Islamic year starts in Muharram and discuss its importance briefly. Talk about Ramazan and its importance and that we celebrate Eid-ul-Fitr at the end of Ramazan. Ask children if they know about the importance of the month of Rabiul-Awwal – it is the month when the Holy Prophet (PBUH) was born. Talk about Hajj which happens on 10 Zil-Hajj and is followed by Eid-ul-Azha (baqr-eid).

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 3,	Children should recall the order of the months in a year and complete
Question 3	the exercise. The first one is done for them.

Homework

Ask children to complete Exercise 3, Question 4.

Unit 8: Shapes and Patterns

Suggested Number of Lessons: 4 to 5

Lesson 1

Objective(s):

- Recognise and identify shapes of similar objects in daily life
- Identify basic shapes square, rectangles, triangle and circle
- Match similar basic shapes in daily life

Teaching Resources: Coloured pencils, crayons, colour cards, cut-outs of simple shapes circle, square, rectangle and triangle

Introduction (10 min)

Discuss the picture with the children and ask them what they can see.

Ask the children to share their observations with the class. Ask them if they recognise any of the shapes in the picture. Can they tell the names?

Refer to the questions on the page. Ask the children if they have seen any similar items in their classroom / homes / a park. Ask them to share their observations. Tell the class that they will be learning about shapes.

Teaching procedure (15 min)

Start the class with discussing some basic colours. Show them crayons or colour cards and ask them to name the colour. Children must be fairly familiar with colours.

Bring large cut-outs of basic shapes such as a circle, square, rectangle and a triangle to the class and make a display. Ask children to name items in their homes which are in the shape of a circle or square or rectangle. For example, a child may say that the door is a rectangle, or they have a circular or square table in their homes.

Show real-life objects that represent basic shapes such as a circular clock face, a rectangular chart paper on the soft board, a square table surface, etc.

Task (15 min)

Ask children to attempt the colouring activity on page 180.

Objective(s):

- Distinguish basic shapes by considering their attributes (sides and corners)
- Classify 2-dimensional shapes according to their number of sides and corners

Teaching Resources: Cut-outs of simple shapes – circle, square, rectangle and triangle Introduction (5 min)

Refer children to display of shapes and ask them to recall the names of the shapes.

Teaching procedure (20 min)

Highlight the basic attributes of the shapes. Show the cut-out of a square to the class and point out its four corners and its four equal sides. Similarly refer to the cut-out of a rectangle and emphasise that the shape also has four sides but the opposite sides are equal. Children should be able to differentiate a rectangle from a square based on its sides.

Show them the cut-out of a triangle and point out that it has three sides and three corners.

Show them a circle and ask if they can see corners in it. A circle has no sides or corners and it is completely round.

Refer to the textbook for reinforcement.

Task (10 min)

Exercise 1, Question 1	Children should match the shape name to the correct shape. The first one is done for them.
Exercise 1, Question 2	Children should match the big shape with its correct smaller version. The first one is done for them.

Homework

Ask children to complete Exercise 1, Question 3.

Objective(s):

- Identify the next shape in patterns with 2 or 3 elements
- Extend a given pattern of 2 or 3 elements

Teaching Resources: Pattern chart, basic shape cut-outs – different colours, sizes, etc. Introduction (5 min)

Recall the basic shapes with the children.

Teaching procedure (20 min)

Bring cut-outs of basic shapes to class. Make sure that they are of the same size. Arrange them in a manner that shows a pattern, for example, place a square, then a circle, then a square and then a circle, and so on. Ask the children to observe the pattern and then ask them what would be the next shape if the pattern is continued. Make things challenging by introducing three shapes, shapes of different sizes, different colours, etc.

Refer to the examples in the textbook for reinforcement.

Exercise 2,	Children should recognise the pattern and choose the correct shape that
Question 1	comes next in the sequence. The first one is done for them.

Objective(s):

Identify whether an object is placed inside/outside, above/below, over/under, far/near, before/after a given picture

Teaching Resources: common objects – book, pencil, ball, chalk, duster, cloth bag, etc. Introduction (5 min)

Children must have covered positioning in their English classes. Elicit from children how well they remember the terms.

Teaching procedure (20 min)

Place a chair below the classroom board. Show the children that the chair is below the board, while the board is above the chair.

Place a desk at the front of the class and place a bag or a small box under it to explain the concept of 'under'. Refer to a picture of a horse or a dog jumping over a fence to explain the concept of 'over'.

Call two children to the front of the class and demonstrate the concept of before and after.

Place a bag near the teacher's desk and then place a chair away from the desk to demonstrate the concept of near and far.

Demonstrate the concept of inside and outside. Use a cloth bag and place a ball inside the bag. Then take the ball outside.

Refer to the textbook for reinforcement.

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