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VOLUME 2

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SCIENCE
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Department Of School Education

Untouchability is Inhuman and a Crime

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MATHEMATICS

Term - III

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E-book

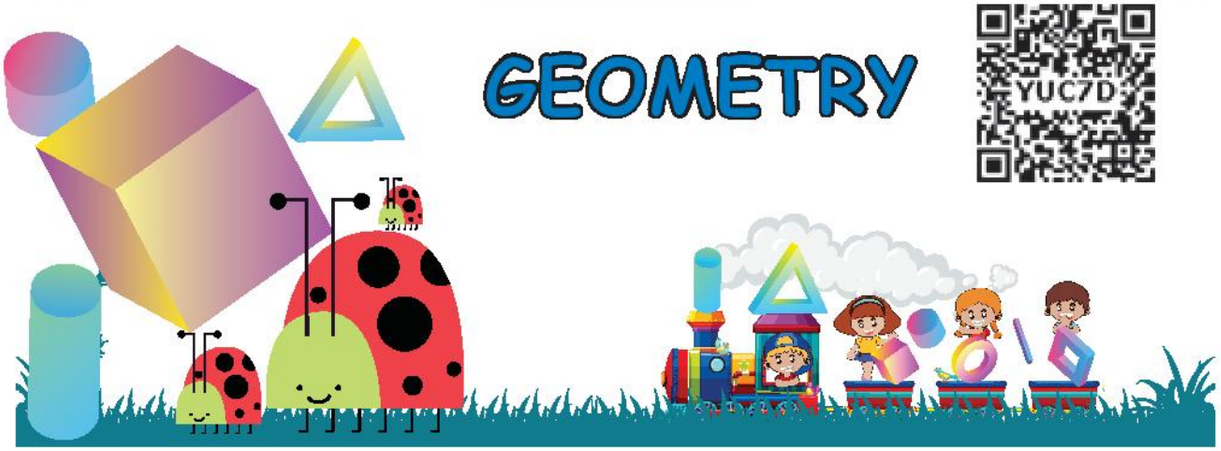
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Assessment

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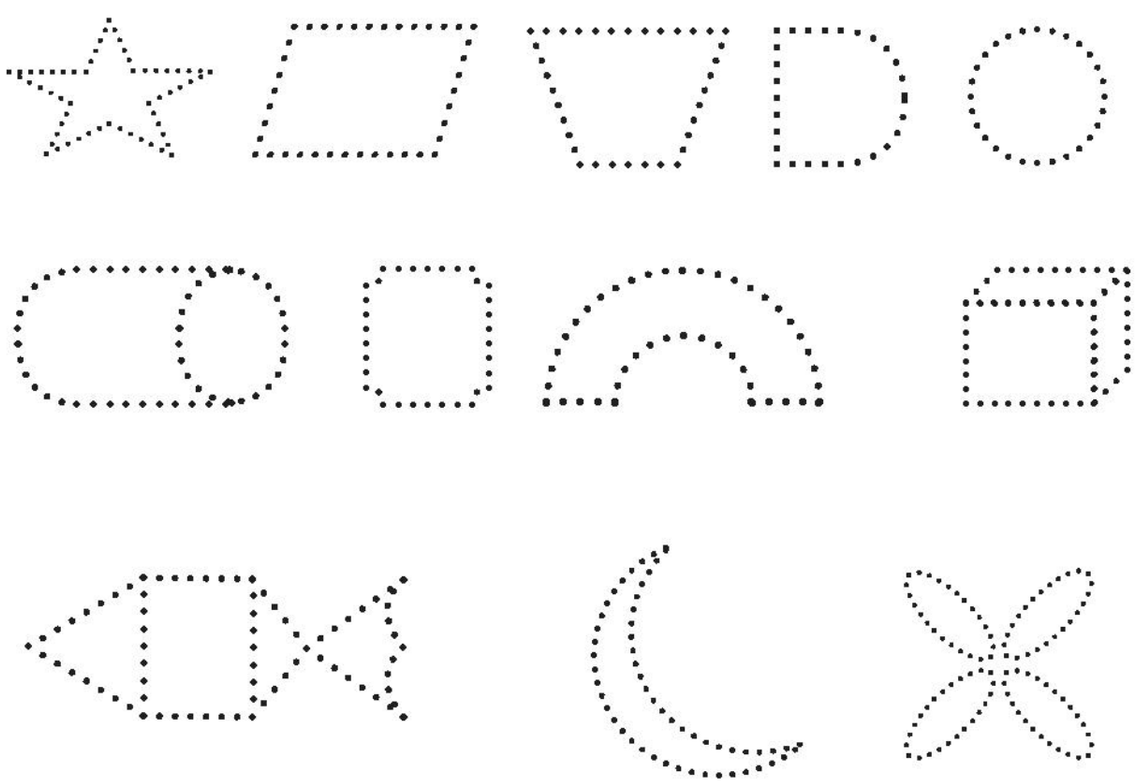
UNIT-1

GEOMETRY



1.1 Straight Lines and Curved Lines

Complete the shapes by joining dots. grid and sort them by writing 'c' for shapes made of curved lines 's' for shapes made of straight lines and 'cs' for shapes with both curved and straight lines



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Draw shapes in each category on your own.

i) Curved lines

ii) straight lines

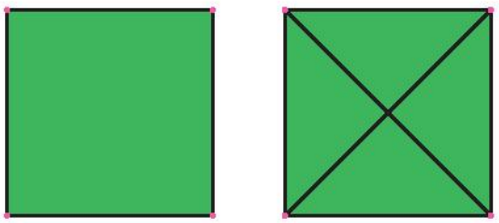
iii) Curved lines and straight lines.

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1.2 Diagonal

Diagonal is the line joining opposite corners of a geometrical shape.

Observe the corners of the square.



The line joining opposite corners of a square is called the **diagonal** of the square.

A square has two diagonals.

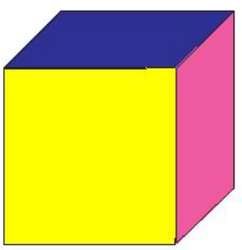
Diagonals of a cube:

A Cube has six square faces. Each square has two diagonals.

Diagonals in the faces = 6 × 2 = 12.

Diagonals in the inner sides of 4 corners = 4.

Total number of diagonals of a cube = 12 + 4 = 16.

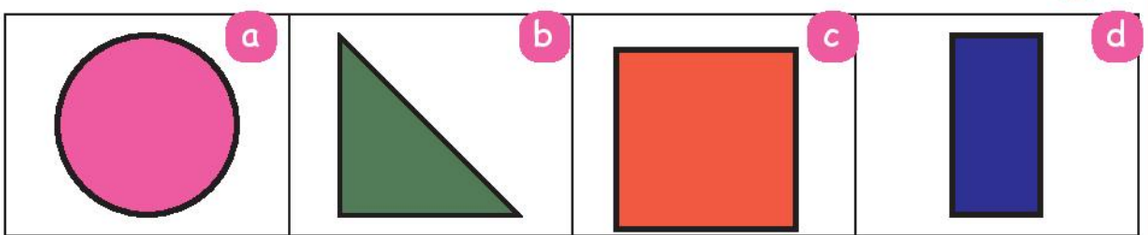


Draw the diagonals for the given rectangle.



How many diagonals will be there in a cuboid? _____.

Match the properties of 2D shapes by observing their sides and corners (vertices).



1. Opposite sides are equal. ( )
2. There are no sides and corners. ( )
3. Sides may or may not be equal. ( )
4. All the four sides are equal. ( )

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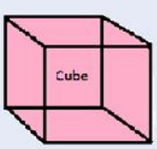
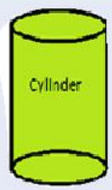
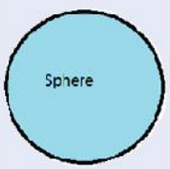
1.3 Properties of 3D Objects

1. Pick out the shapes with (i) curved surfaces (ii) flat surfaces (iii) curved and flat surfaces from the given picture and completed table.



curuved surface
flat surface
curved and flat surface

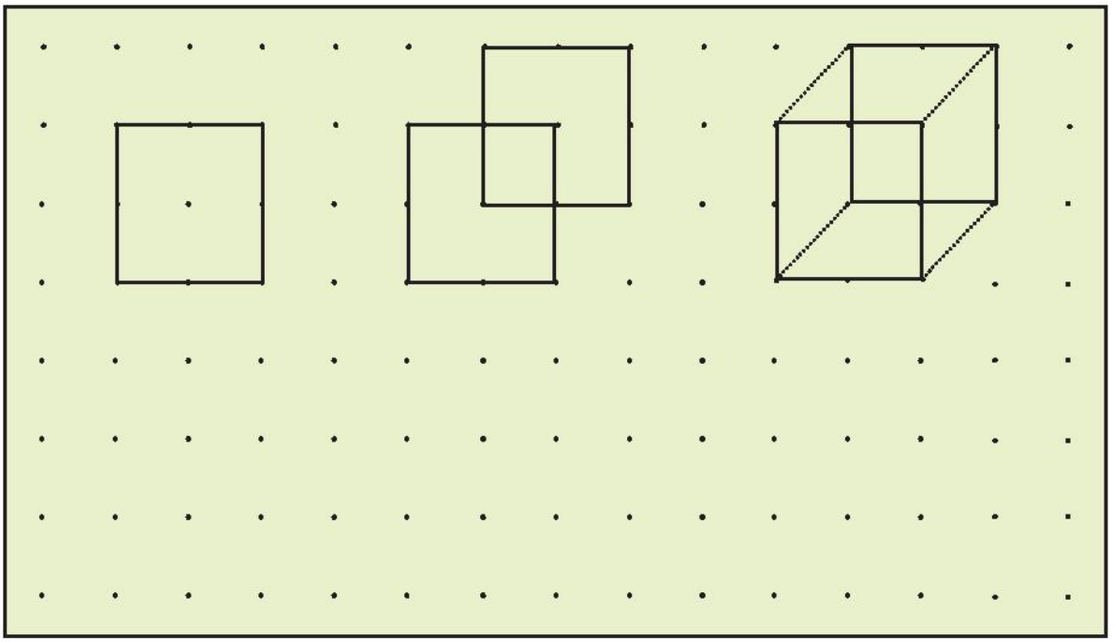
2. Complete the table by counting the sides, corners and diagonals of the given 3D shapes.

3D shapes					
Name of the 3D shapes	Cube	Cuboid	Cylinder	Cone	Sphere
Number of faces					
Number of edges					
Number of corners					
Number of diagonals					

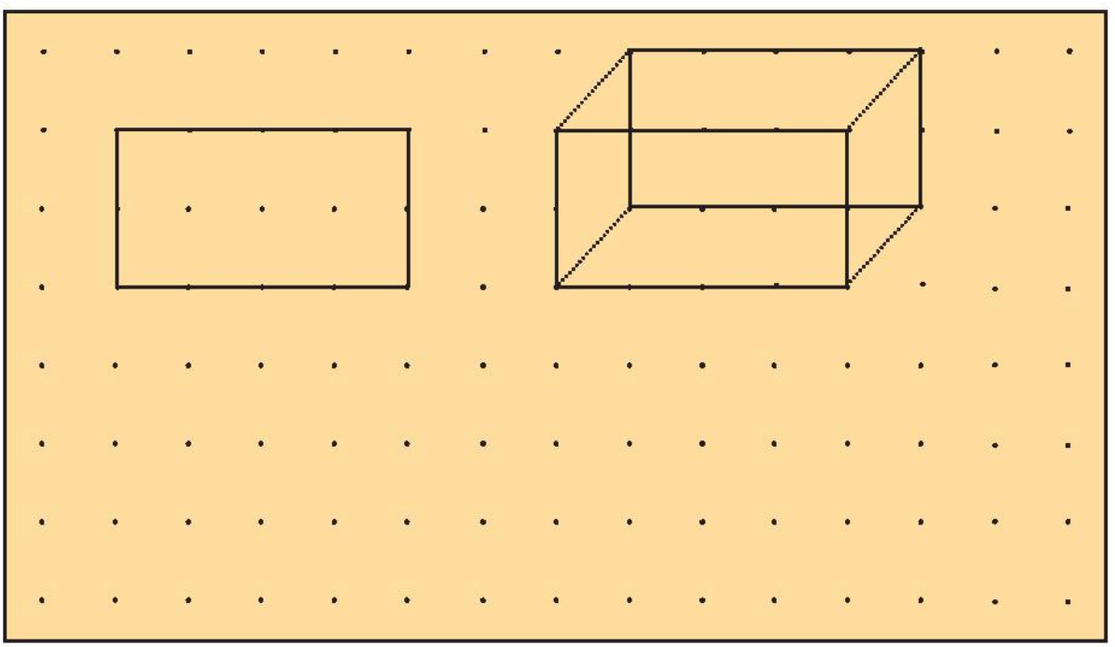
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3. Follow the given steps and draw the 3-D objects.

(i) Cube

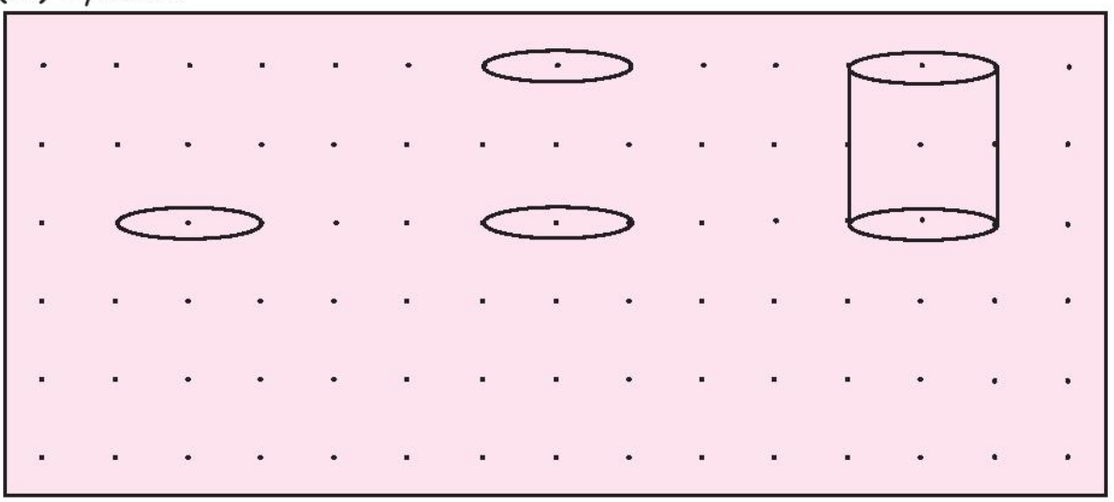


(ii) Cuboid

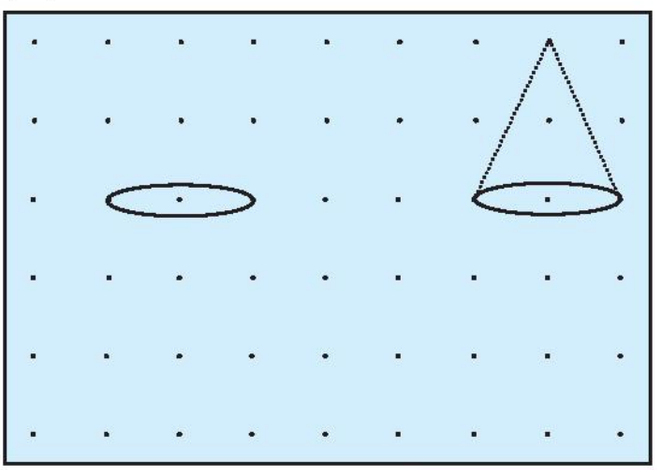


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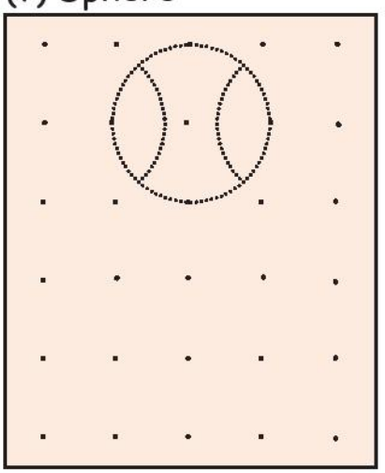
(iii) Cylinder



(iv) Cone



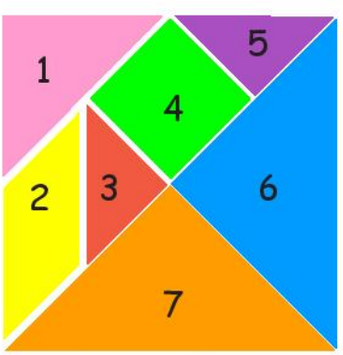
(v) Sphere

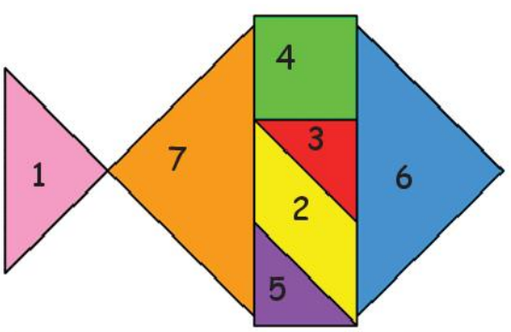


1.4 Tangrams

Let us recall tangrams

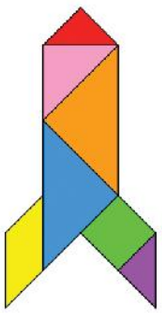
A traditional Chinese puzzle made of a square divided into seven pieces (one parallelogram, one square and five triangles) that can be arranged to match particular designs. We can make figures of animals, people and many things using these 7 pieces.



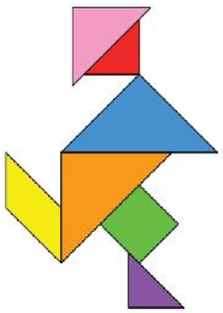


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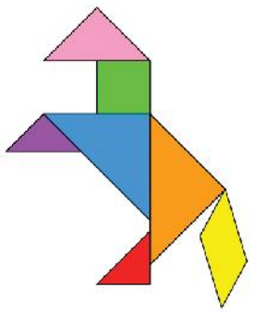
A tangram rocket



A tangram dancing girl

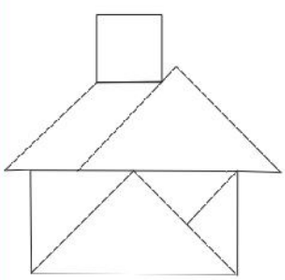


A tangram horse

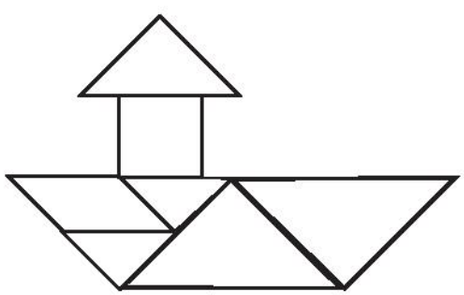


Identify the tangram pieces used in the given images by colouring and numbering the pieces as in the reference figure.

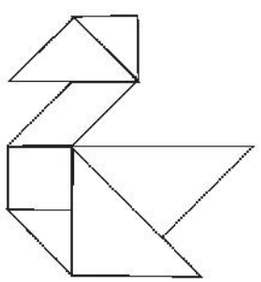
A tangram house



A tangram boat



A tangram swan



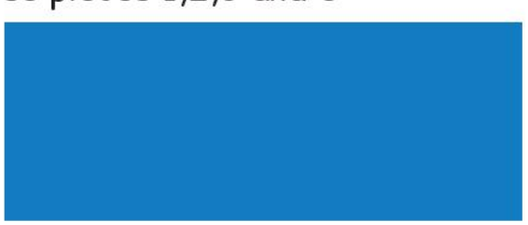
Activity

Collect or make a set of tangram piece with the help of your parents, teacher or elders and try to make shapes as instructed.

1. Use only triangles



2. Use pieces 1,2,3 and 5



3. (i) Rabbit
   (ii) Telephone
   (iii) Various shapes of your choice

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1.5 Tessellation

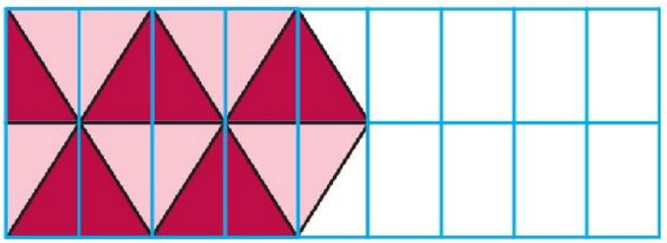
A tessellation is created when a shape is repeated over and over again covering a plane without any gap or overlap.

When you fit individual tiles together with no gap or overlap to fill a flat space, you have a **tiled floor**.

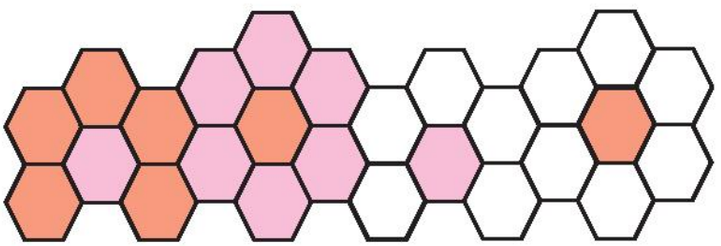
We have already learnt that few shapes such as triangles, squares, hexagons tile on a plane while few figures such as pentagons, heptagons do not tessellate on a plane.

1. Complete the shapes by filling the tiles.

i)



ii)

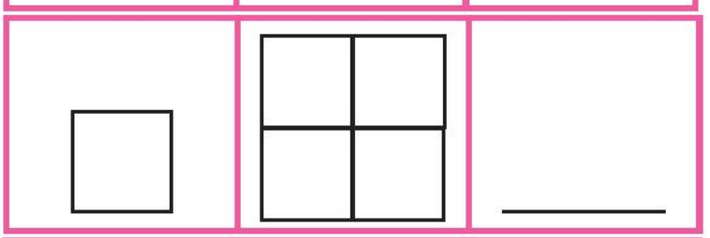


2. Draw one more tile to continue the pattern.

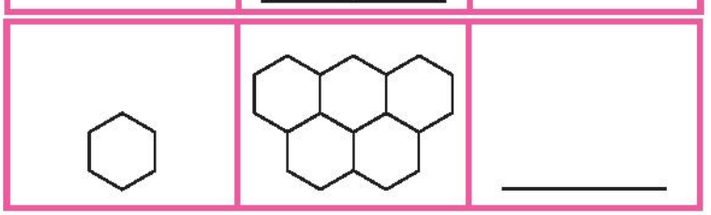
i)



ii)



iii)



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UNIT-2

NUMBERS



2.1 Equal sharing and repeated subtraction

Kabilan had 30 mangoes and wanted to share them among 5 of his friends. Let us see the way he shared the mangoes one by one equally among his friends.

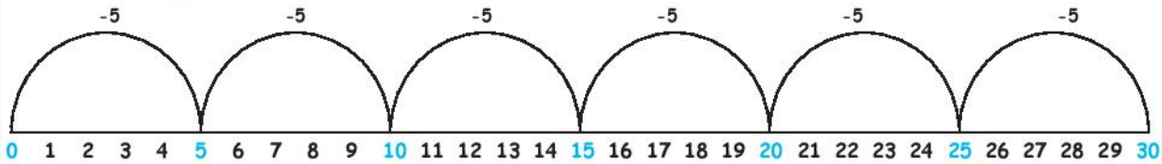
Number of steps	Number of mangoes with Kabilan	Friends					Number of mangoes remaining
		F 1	F 2	F 3	F 4	F 5	
Step 1	30						25
Step 2	25						20
Step 3	20						15
Step 4	15						10
Step 5	10						5
Step 6	5						0
Total number of mangoes each had at the end	0	6	6	6	6	6	0

F=Friend

Number of steps = 6

3rd_Unit_02_Numbers_Term 3.indd 9 9/2/2022 1:21:04 PM

Let us express this in a number line



Repeated subtraction statement 30 - 5 - 5 -5 - 5 -5 -5 = 0

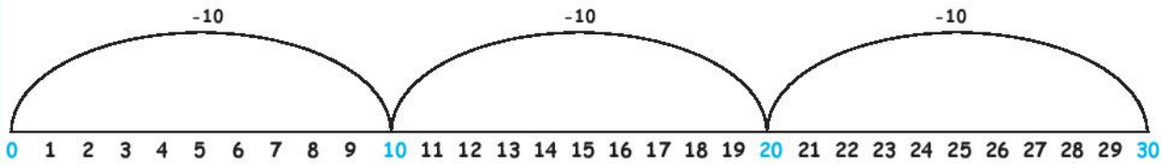
Kabilan distributed **30 mangoes** among **5 of his friends** by giving them one mango in each step.Thus each friend has got **6 mangoes.**

Imagine Kabilan has to share these 30 mangoes among 10 of his friends.

Number of steps	Number of mangoes with Kabilan	Friends										Number of mangoes remaining
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	
Step 1	30											20
Step 2	20											10
Step 3	10											0
Total number of mangoes each had at the end	0	3	3	3	3	3	3	3	3	3	3	0

Number of steps = 3

The number line for the above situation:



Repeated subtraction statement 30 -10 -10 - 10 = 0

This time Kabilan has shared **30 mangoes** among **10 of his friends in 3 steps.** Each friends has got **3 mangoes.**

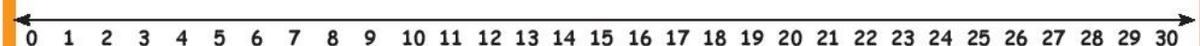
3rd_Unit_02_Numbers_Term 3.indd 10 9/2/2022 1:21:05 PM

Suppose Kabilan has to share the mangoes among 15 of his friends. How many mangoes would each of them get? How Many steps would he require to share the mangoes among them?

Number of steps	Number of mangoes with Kabilan	F 1	F 2	F 3	F 4	F 5	F 6	F 7	F 8	F 9	F 10	F 11	F 12	F 13	F 14	F 15	Number of mangoes remaining
Total number of mangoes each had at the end																	

Number of steps =

Complete the number line

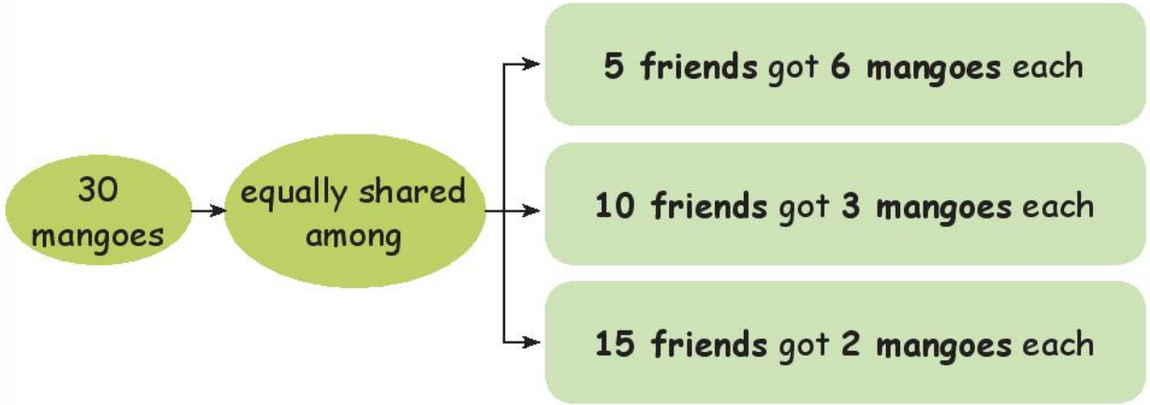


Repeated subtraction statement _____

Kabilan shared 30 mangoes among 15 of his friends in _____ steps.

Each friend got _____ mangoes.

Let us summarize the above 3 examples as follows.



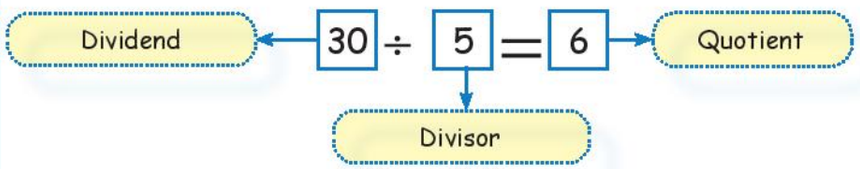
This can also be written as

30 ÷ 5=6 30 ÷ 10=3 30 ÷ 15=2

3rd_Unit_02_Numbers_Term 3.indd 11 9/2/2022 1:21:06 PM

Equal sharing is mathematically called as "division" and division is denoted by the symbol "÷".

The Division fact is $30 \div 5 = 6$



Let us see another example

$$8 \div 4 = 2$$

Here, 8 is the dividend 4 is the divisor and 2 is the quotient

Complete the table:

Total number of Balloons to be shared.	Number of baskets	Equal sharing	Number of balloons in each basket	Division fact
8	4		2	8 ÷ 4 = 2
8	2			
10	5			
15	3			
30	6			

Can you share 2 mangoes among 5 of your friends?
No, This means that dividend should always be greater than the divisor.

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2.2 Equal Grouping

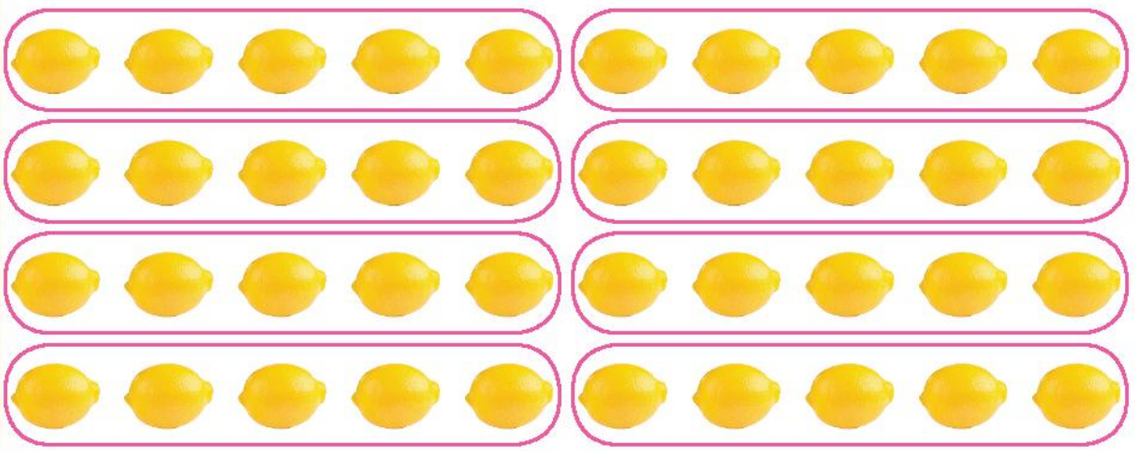
Division can also be done by **Equal grouping.**

This is Rangamma's shop.

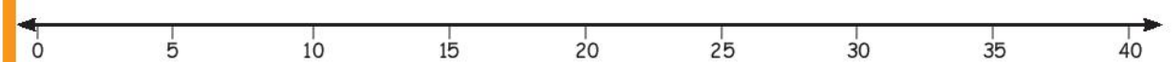


She used to arrange the vegetables into equal groups called as *kooru* to sell them.

1. **Rangamma has 40 lemons and arranged 5 lemons in each group. Shall we find the number of groups.**



Show this in the given number line.



The number statement can be written as 40 ÷ 5= 8

2. **Rangamma has 36 coconuts and arranges them into group of 4 each. Find the number of groups.**



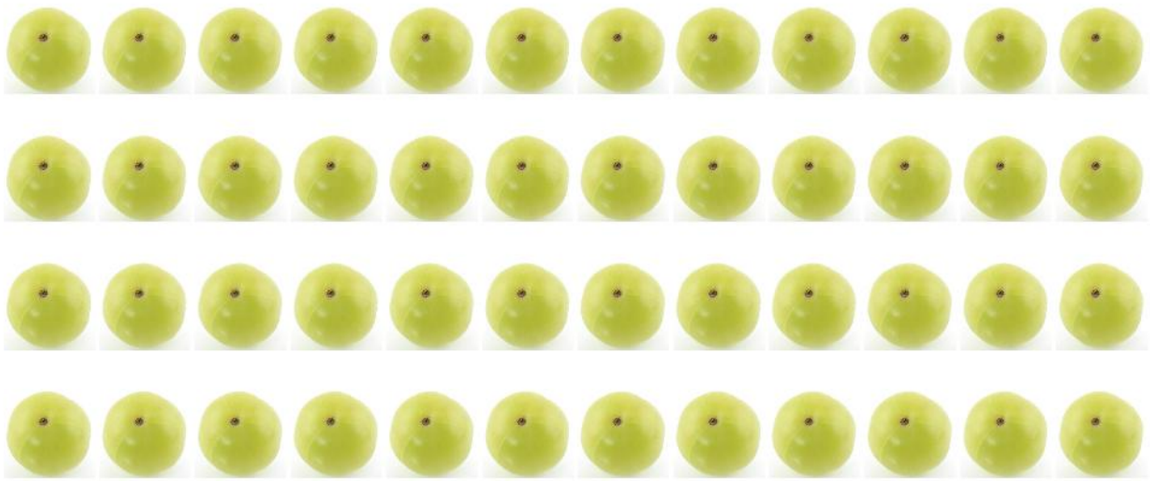
The number line can be drawn as



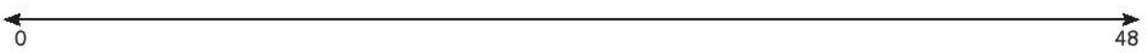
The number statement is _____

3rd_Unit_02_Numbers_Term 3.indd 13 9/2/2022 1:21:10 PM

3. Rangamma has got 48 gooseberries and arranges them into group of 6 each. Find the number of groups.



The number line can be drawn as



The number statement is _____

4. Find few other ways that Rangamma can group these 48 gooseberries and write the number statements.

a. _____ ÷ _____ = _____
b. _____ ÷ _____ = _____
c. _____ ÷ _____ = _____
d. _____ ÷ _____ = _____
e. _____ ÷ _____ = _____
f. _____ ÷ _____ = _____
g. _____ ÷ _____ = _____
h. _____ ÷ _____ = _____
i. _____ ÷ _____ = _____
j. _____ ÷ _____ = _____

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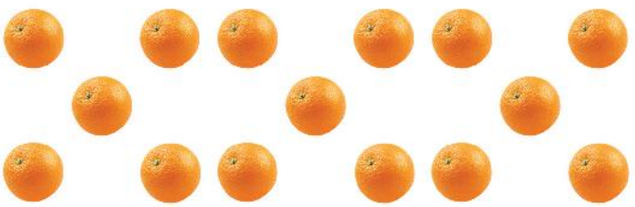
Exercise

a. Divide 8 balls into a group of 2 each.



$8 \div 2 = \square$

b. Divide 15 oranges into a group of 3 each.



$15 \div 3 = \square$

c. Divide 20 cups into groups of 5 each.



$20 \div 5 = \square$

Activity

- Give a handful of tamarind seeds to a child and keep some number chits in a box. Let him/her pick out a number chit from the box.
- Now let him/her make it to groups as per the number in the chit taken from the box.
- Once the child has finished grouping ask him/her to write the division fact on the blackboard.

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2.3 Multiplication and Division

Consider the division fact

$8 \div 2 = 4$



Roja has 8 chocolates. She divides them among 2 of her friends. How many chocolates would each friend get?

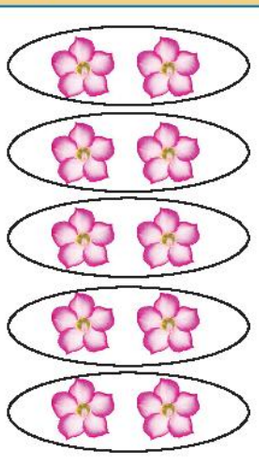
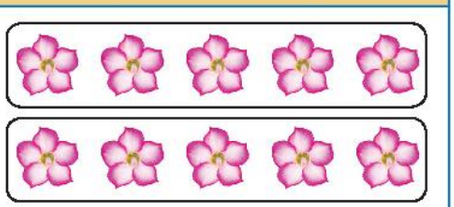
This means 2 groups of 4 make 8 which can be written as

$2 \times 4 = 8$

It means multiplication and division are reverse operations.

$2 \times 4 = 8$
$8 \div 2 = 4$

Consider the arrangement of these 10 flowers.

Multiplication fact ($2 \times 5 = 10$)	Division fact-1 ($10 \div 2 = 5$)	Division fact-2 ($10 \div 5 = 2$)
		

5 groups of 2 flowers make 10 flowers $5 \times 2 = 10$

2 groups of 5 flowers make 10 flowers $2 \times 5 = 10$

10 flowers can be put into 5 groups of 2 flowers each $10 \div 5 = 2$

10 flowers can be put into 2 groups of 5 flowers each $10 \div 2 = 5$

3rd_Unit_02_Numbers_Term 3.indd 16 9/2/2022 1:22:15 PM

Finding the division fact for the given multiplication fact.



Division fact for Multiplication table two		
Multiplication fact	Division fact	
1 X 2 = 2	2 ÷ 1 = 2	2 ÷ 2 = 1
2 X 2 = 4	4 ÷ 2 = 2	4 ÷ 2 = 2
3 X 2 = 6	6 ÷ 3 = 2	6 ÷ 2 = 3
4 X 2 = 8	8 ÷ 4 = 2	8 ÷ 2 = 4
5 X 2 = 10	10 ÷ 5 = 2	10 ÷ 2 = 5
6 X 2 = 12	12 ÷ 6 = 2	12 ÷ 2 = 6
7 X 2 = 14	14 ÷ 7 = 2	14 ÷ 2 = 7
8 X 2 = 16	16 ÷ 8 = 2	16 ÷ 2 = 8
9 X 2 = 18	18 ÷ 9 = 2	18 ÷ 2 = 9
10 X 2 = 20	20 ÷ 10 = 2	20 ÷ 2 = 10



Construct the division fact for the multiplication tables 3.

Division fact for Multiplication table three		
Multiplication fact	Division fact	
1 X 3 = 3		
2 X 3 = 6		
3 X 3 = 9		
4 X 3 = 12		
5 X 3 = 15		
6 X 3 = 18		
7 X 3 = 21		
8 X 3 = 24		
9 X 3 = 27		
10 X 3 = 30		

3rd_Unit_02_Numbers_Term 3.indd 17 9/2/2022 1:22:16 PM

Construct the division fact for the multiplication tables 4.

Division fact for Multiplication table four		
Multiplication fact	Division fact	
1 X 4 = 4		
2 X 4 = 8		
3 X 4 = 12		
4 X 4 = 16		
5 X 4 = 20		
6 X 4 = 24		
7 X 4 = 28		
8 X 4 = 32		
9 X 4 = 36		
10 X 4 = 40		

Construct the division fact for the multiplication tables 5.

Division fact for Multiplication table five		
Multiplication fact	Division fact	
1 X 5 = 5		
2 X 5 = 10		
3 X 5 = 15		
4 X 5 = 20		
5 X 5 = 25		
6X 5 = 30		
7 X 5 = 35		
8 X 5 = 40		
9 X 5 = 45		
10 X 5 = 50		

3rd_Unit_02_Numbers_Term 3.indd 18 9/2/2022 1:22:16 PM

Construct the division fact for the multiplication tables 10.

Division fact for Multiplication table ten		
Multiplication fact	Division fact	
1 X 10 = 10		
2 X 10 = 20		
3 X 10 = 30		
4 X 10 = 40		
5 X 10 = 50		
6X 10 = 60		
7 X 10 = 70		
8 X 10 = 80		
9 X 10 = 90		
10 X 10 = 100		

Find the quotient of the following.

1. 12 ÷ 4 = _____

   3 times 4 is 12 i.e.,3 X 4 = 12

   Hence 12 ÷ 4 = 3

$4 \times 1 = 4$
$4 \times 2 = 8$
$4 \times \mathbf{3} = \mathbf{12}$

say multiplication table 4 till you get product 12.

2. 25 ÷ 5 = _____

   5 times 5 is 25 i.e.,5 X 5 =25

   Hence 25 ÷ 5 = 5

$5 \times 1 = 5$
$5 \times 2 = 10$
$5 \times 3 = 15$
$5 \times 4 = 20$
$5 \times \mathbf{5} = \mathbf{25}$

Say multiplication table 5 till you get product 25

Exercise

Divide and find the quotient

20 ÷ 4 = ☐	10 ÷ 2 = ☐	24 ÷ 3 = ☐
10 ÷ 10 = ☐	30 ÷ 5 = ☐	14 ÷ 2 = ☐

3rd_Unit_02_Numbers_Term 3.indd 19 9/2/2022 1:22:16 PM

UNIT-3

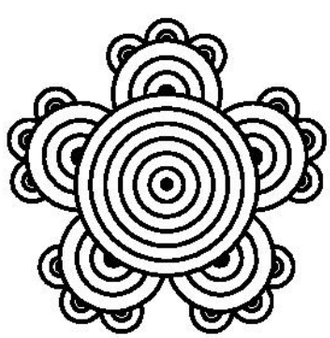
PATTERNS



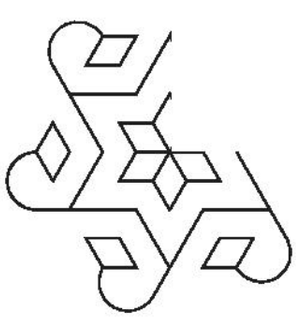
3.1 Iterative patterns and processes

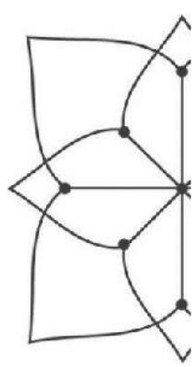
Introduction

Rangoli is created by the growing patterns of colours and shapes. These are few rangolis exhibiting such patterns


1. Continue the pattern to complete the rangoli.





3rd_Unit_03_Patterns_Term 3.indd 20 12-10-2022 18:08:02

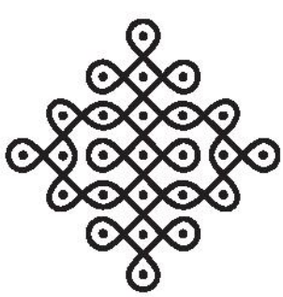
2. Make a pattern of your own on the given category and draw a rangoli.

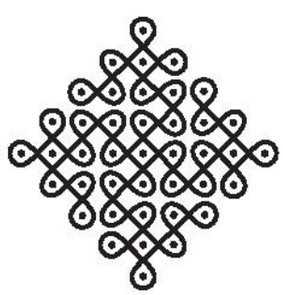
a. Triangle and circles

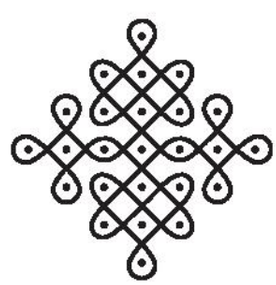
b. Square and triangle

Pulli kolam

Pulli kolams are created by drawing straight lines and curved lines along the pulli (dots)



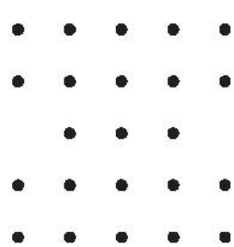




These pulli kolam can be extended to any area by repeating and continuing the patterns of straight lines and curves

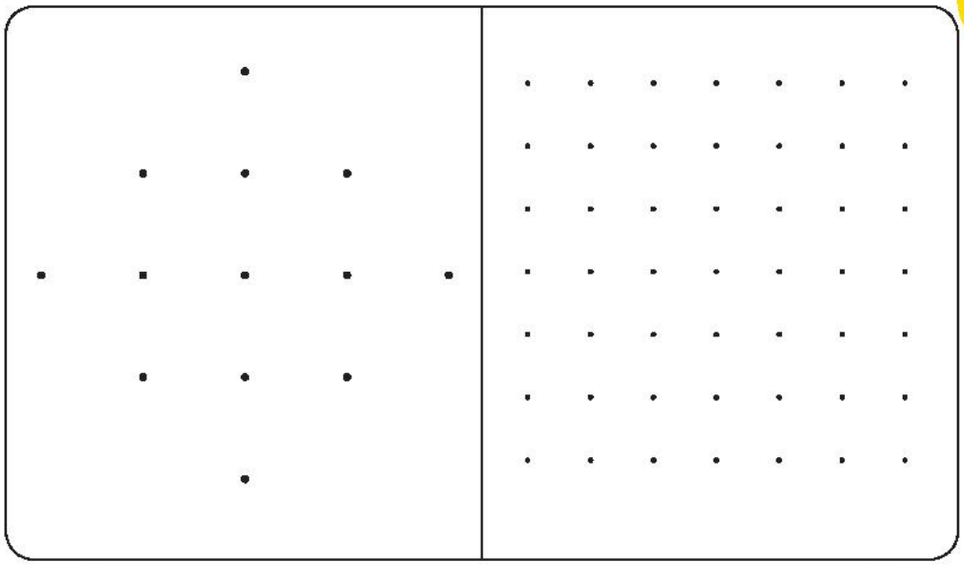
3. Draw a pulli kolam by looking at the reference image without lifting your hand.





3rd_Unit_03_Patterns_Term 3.indd 21 12-10-2022 18:08:02

4. Draw 2 pullikolams of your choice along the given dots.



3.2 Patterns obtained by adding numbers

1. Complete the addition table and observe the pattern in them

+	0	1	2	3	4	5	6	7	8	9	10
0	0	1	2	3	4	5		7	8	9	10
1	1		3	4	5	6	7	8	9		11
2	2	3	4	5	6		8	9	10		12
3	3		5	6	7	8		10	11	12	13
4	4	5		7	8	9		11	12	13	14
5	5	6	7		9	10	11	12		14	15
6	6		8	9	10		12	13	14	15	16
7	7	8	9	10	11	12	13	14		16	17
8	8	9	10	11		13		15	16	17	18
9	9	10	11	12	13	14	15	16	17	18	
10	10	11	12	13	14	15		17	18	19	20

Observe the given table and you can find that there are many ways to get the sum ten.

3rd_Unit_03_Patterns_Term 3.indd 22 12-10-2022 18:08:02

Let us write the numbers which add upto 10

addition fact of 0	addition fact of 10									
0 + 0 = 0	0 + 10 = 10	1 + 9 = 10	2 + 8 = 10	3 + 7 = 10	4 + 6 = 10	5 + 5 = 10	6 + 4 = 10	7 + 3 = 10	8 + 2 = 10	9 + 1 = 10	10 + 0 = 10

Like the example given above 10, we can also find that there are more than one set of numbers which sum upto a given number.

2. Write the numbers which add upto the given addition fact.

addition fact of 1		addition fact of 11									
0 + 1 = 1	1 + 0 = 1	1 + 10 = 11	2 + 9 = 11	3 + 8 = 11	4 + 7 = 11	5 + 6 = 11	6 + 5 = 11	7 + 4 = 11	8 + 3 = 11	9 + 2 = 11	10 + 1 = 11

addition fact of 2			addition fact of 12								
+ 2 =	+ 2 =	+ 2 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =	+ 12 =

addition fact of 3				addition fact of 13							
+ 3 =	+ 3 =	+ 3 =	+ 3 =	+ 13 =	+ 13 =	+ 13 =	+ 13 =	+ 13 =	+ 13 =	+ 13 =	+ 13 =

addition fact of 4					addition fact of 14						
+ 4 =	+ 4 =	+ 4 =	+ 4 =	+ 4 =	+ 14 =	+ 14 =	+ 14 =	+ 14 =	+ 14 =	+ 14 =	+ 14 =

addition fact of 5						addition fact of 15					
+ 5 =	+ 5 =	+ 5 =	+ 5 =	+ 5 =	+ 5 =	+ 15 =	+ 15 =	+ 15 =	+ 15 =	+ 15 =	+ 15 =

3rd_Unit_03_Patterns_Term 3.indd 23 12-10-2022 18:08:03

addition fact of 6						addition fact of 16					
+ 6	+ 6	+ 6	+ 6	+ 6	+ 6	+ 16	+ 16	+ 16	+ 16	+ 16	+ 16

addition fact of 7							addition fact of 17				
+ 7	+ 7	+ 7	+ 7	+ 7	+ 7	+ 7	+ 17	+ 17	+ 17	+ 17	+ 17

addition fact of 8								addition fact of 18			
+ 8	+ 8	+ 8	+ 8	+ 8	+ 8	+ 8	+ 8	+ 18	+ 18	+ 18	+ 18

addition fact of 9									addition fact of 19		
+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 19	+ 19	+ 19

3. Find out the missing numbers and write them in the given blank.

23 + 3_ 60	74 + 5_ 130	45 + 1_ 61	12 + _3 105	25 + _3 118

3rd_Unit_03_Patterns_Term 3.indd 24 12-10-2022 18:08:05

3.3 Patterns in repeated addition as multiplication

'**Multiplication**' refers to '**repeated addition**'.





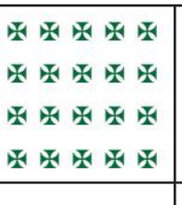
Example

Pictorial representation					
Repeated addition statement	3	3 + 3	3 + 3 + 3	3 + 3 + 3 +3	3 + 3 + 3 +3 + 3
Multiplication fact	1 × 3 = 3	2 × 3 = 6	3 × 3 = 9	4 × 3 = 12	5 × 3 = 15

Pictorial representation					
Repeated addition statement	4	4 + 4	4 + 4 + 4	4 + 4 + 4 +4	4 + 4 + 4 +4 + 4
Multiplication fact	1 × 4 = 4	2 × 4 = 8	3 × 4 = 12	4 × 4 = 16	5 × 4 = 20

Exercise

Continue the patterns by using mutiplication as repeated addition.

Pictorial representation					
Repeated addition statement					
Multiplication fact					

3rd_Unit_03_Patterns_Term 3.indd 25 12-10-2022 18:08:07

Pictorial representation	♣♣	♣♣ ♣♣	♣♣ ♣♣ ♣♣	♣♣ ♣♣ ♣♣ ♣♣	
Repeated addition statement					
Multiplication fact					

3.4 Division as repeated subtraction

'**Division**' refers to '**repeated subtraction**'.

Example 20 ÷ 4

Step: 1	❖❖❖❖❖❖❖❖❖❖ ❖❖❖❖❖❖~~❖❖❖❖~~	20 – 4 = 16
Step: 2	❖❖❖❖❖❖❖❖ ❖❖❖❖~~❖❖❖❖~~	16 – 4 = 12
Step: 3	❖❖❖❖~~❖❖❖❖~~ ~~❖❖❖❖~~	12 – 4 = 8
Step: 4	❖❖❖❖❖❖❖❖	8 – 4 = 4
Step: 5	~~❖❖❖❖~~	4 – 4 = 0

Exercise

Express the division facts as repeated addition using patterns

a) 24 ÷ 3 b) 22 ÷ 2 c) 32 ÷ 4 c) 15 ÷ 3

3rd_Unit_03_Patterns_Term 3.indd 26 12-10-2022 18:08:07

UNIT-4

MEASUREMENTS



Recall

How many glass of water do you drink in a day?

Summer day: _____ Glasses

Winter day: _____ Glasses



Some vessels full of water are given here. Observe them and tell which one can hold more water and which one holds less water.

3rd_Unit_04_Measurement_Term 3.indd 27 12-10-2022 18:12:23

4.1 Measurement by non standard tools

 can hold  3 tumblers of water.

So, the capacity of  is equal to  3 tumblers.

 can hold  5 tumblers of water.

So, the capacity of  is  5 tumblers.

 can hold  10 tumblers of Water.

So, the capacity of  is  10 tumblers.

1. Tick the container that holds more water.





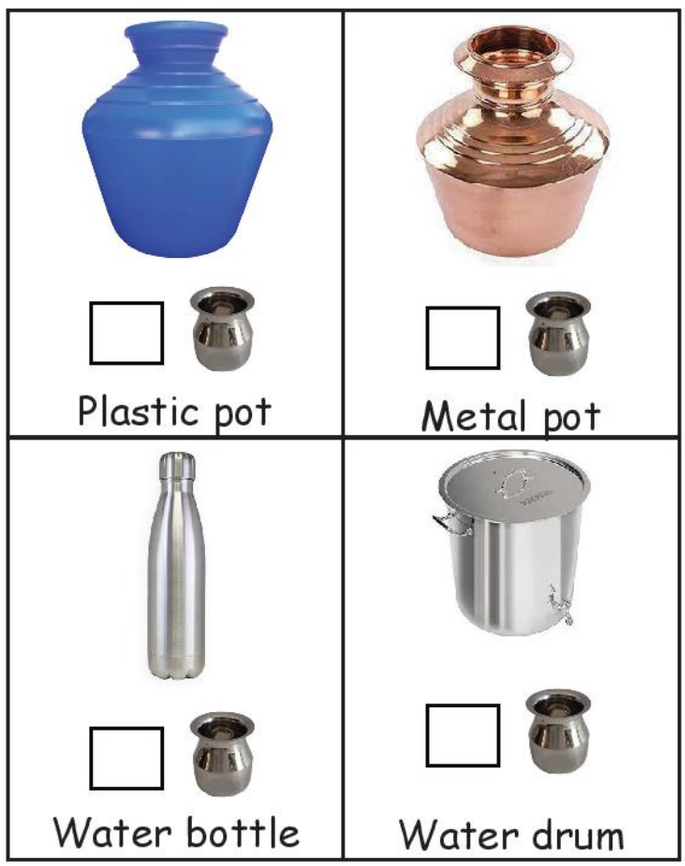
3rd_Unit_04_Measurement_Term 3.indd 28 12-10-2022 18:12:24

2. Which among the given container will hold more water?



Activity

3.a Measure using  and complete the data.



3.b Arrange the vessels given above by their capacity from less water to the vessels with more water by writing the names in the blanks.

1. _____ 3. _____

2. _____ 4. _____

3rd_Unit_04_Measurement_Term 3.indd 29 12-10-2022 18:12:25

4.2 Measurement by standard tools

Meena & her mother

Mother : Meena! Pour one tumbler of water into the flour.

Meena : Ok, ma!

Mother : The batter is so thick. Did you pour one full tumbler of water?

Meena : Yes, ma!

Mother : Which tumbler did you use?



Meena : Ma, I used the small tumbler.

Mother : You have to use a bigger one.

Meena : Okay ma.

Mother : Meena! Now bring me 2 tumblers of water to pour in this milk.

Meena : Ma, I have brought water in big tumbler

Mom : Meena, now you should have to bring water in the small tumbler.

Meena : Ma, Sometimes you ask me to bring water in big tumbler and sometimes small tumbler. I don't know when to bring in big tumbler and when to bring in small tumbler.

What shall we do to find a solution for this issue?

3rd_Unit_04_Measurement_Term 3.indd 30 12-10-2022 18:12:25

We need a standard tool to measure capacities of containers. We also need a standard unit to express capacities of containers.

These are some Standard tools to measure capacity. You can find them in milk shops, grocery shops, etc., We measure liquids such as water, oil, milk, petrol., using these tools.







Standard units for measuring capacity of a container is litre.

- We measure liquids of less quantity/capacity of smaller containers using millilitres.
- We measure the liquids of more quantity /capacity of bigger containers using litres.

Activity

1. Teacher can conduct the game, fill in the bottle.

2. Teacher can conduct a mock milk shop in the class.

3rd_Unit_04_Measurement_Term 3.indd 31 12-10-2022 18:12:25

1. Complete the table according to thier capacity.



Pot



Medicine bottle



Oil can



Water can



Tumbler



Water pot

Less than 1 litre vessel	More than 1 litre vessel
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____

2. Tick the appropriate unit to measure the given liquid.

S. No	Liquid to be Measured	Millilitres	Litres
1.	Cough syrup		
2.	vinegar		
3.	water in tank		
4.	Water you bring to school		
5.	Oil in kitchen		
6.	Petrol		

3rd_Unit_04_Measurement_Term 3.indd 32 12-10-2022 18:12:25

3. Tick the biggest unit

i.	a) 500 ml	b) 100 ml	c) 50 ml	d) 75 ml
ii.	a) 200 ml	b) 300 ml	c) 150 ml	d) 175 ml
iii.	a) 5 l	b) 2 l	c) 8 l	d) 7 l
iv.	a) 3 l	b) 300 ml	c) 30 ml	d) 30 l
v.	a) 250 ml	b) 1500 ml	c) 760 ml	d) 75 l

4. Circle the smallest unit

i.	a) 250 ml	b) 350 ml	c) 50 ml	d) 750 ml
ii.	a) 300 ml	b) 350 ml	c) 800 ml	d) 275 ml
iii.	a) 10 l	b) 3 l	c) 9 l	d) 6 l
iv.	a) 3 l	b) 350 ml	c) 5 ml	d) 40 l
v.	a) 2500 ml	b) 100 ml	c) 810 ml	d) 175 l

5. How many litres of water do you use for the following purpose in your house? Complete the table.

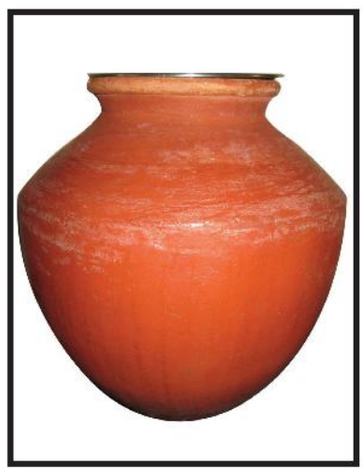
Activities at home	Litre
Bathing	
Drinking	
Brushing teeth	
Cooking	
Washing kitchen utensils	
Watering the garden	
Mopping the floors.	

3rd_Unit_04_Measurement_Term 3.indd 33 12-10-2022 18:12:25

6. How many litres are needed for fi ling the given containers. Complete the table by measuring the containers with one litre bottle.







Bottle	_____ 1 litre bottles
Bucket	_____ 1 litre bottles
Pot	_____ 1 litre bottles

Activity

Take a 1 litre bottle and a tumbler fi ll the bottle using it.
How many times did you use the tumbler for fi lling the bottle ?

Repeat the same activity using different containers (Cups, tumblers, bottles) and record you fi ndings.

1. Which container was used twice?

2. Which container was used four times?

PUMR6

3rd_Unit_04_Measurement_Term 3.indd 34 12-10-2022 18:12:25

UNIT-5

Money



5.1 Rupees and Paise

We have learnt about currencies and coins of various denominations in our earlier classes. we shall learn the relation between rupees and paise addition and subtraction of money. We shall also learn about collection and preparation of bills.



1 Rupee = 100 paise

Some coins are given below.



1 paise



2 paise



5 paise



10 paise



20 paise



25 paise



50 paise

These coins are outdated and currently not in use. But the value of paise is still used as digital value. Yet the value of paise is significant.

3rd_Unit_05_Money_Term3.indd 35 18/10/2022 17:54:37

Now, let us see about conversion of rupees into paise

1 rupee = 100 p

2 rupees = 2 x100 p

= 200 paise

5 rupees = 5 x 100 p

= 500 paise

D34G8

1. Convert the following rupees into paise.

Rupees	paise	Rupees	paise
1		6	
2		7	
3		8	
4		9	
5		10	

Know that



=



3rd_Unit_05_Money_Term3.indd 36 18/10/2022 17:54:38

5.2 Addition and Subtraction of Money



Adding and subtracting money is as same as adding and subtracting numbers except that we place a dot to differentiate rupees and paise.

1. Add the following

	Rs P		Rs P		Rs P
1.	35 · 20	2.	80 · 20	3.	90 · 10
	+20 · 20		+10 · 10		+05 · 20
	_____		_____		_____
	Rs P		Rs P		Rs P
4.	270 · 80	5.	440 · 40	6.	220 · 20
	+310 · 00		+440 · 40		+220 · 20
	_____		_____		_____

2. Subtract the following

	Rs P		Rs P		Rs P
1.	20 · 20	2.	28 · 30	3.	35 · 80
	-10 · 10		-25 · 10		-25 · 70
	_____		_____		_____
	Rs P		Rs P		Rs P
4.	820 · 80	5.	540 · 70	6.	754 · 90
	-110 · 20		-130 · 60		-123 · 50
	_____		_____		_____

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Usage of addition and subtraction of money in everyday situation

Kaarkuyil bought a hairclip for ₹. 20·50 and set of bangles for ₹. 30·50 and gave a one hundred rupees note to the shopkeeper. Find the amount to be returned by the shopkeeper to Kaarkuyil.

i) To find the total cost, add the cost of items bought.

ii) Subtract the total cost of items from the amount (₹ 100·00) paid to the shopkeeper. This gives amount to be returned to kaarkuyil

Adding Rupees			**Subtracting Rupees**		
Cost hair clip	=	20·50	Kaarkuyil paid	=	100·00
Cost of bangle	= +	30·50	Total cost	=	- 51·00
Total cost	=	51·00	Shop keeper has to return	=	49·00

Amount returned by the shopkeeper to Kaarkuyil = ₹ 49·00

Exercise

1. Sengothai bought a school bag for ₹. 210·30 and a sports shoe for ₹. 260·20. Find the amount to be returned by the shopkeeper if she paid five hundred rupees to the shopkeeper.

2. Kumaran's father asked him to get a change for ₹. 200 from his uncle. If his uncle gave him a hundred rupees note and a fifty rupees note. How much more his uncle has to give him?

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5.3 Rate Charts and Simple Bills

Rate Charts.

Rate chart is seen in shops. Rate chart gives details about the rate of each item available in a shop.

Bills

Bills are given by the shopkeepers to the customers as an acknowledgment of purchase. Bills give us complete details about the purchase.

Observe the menu card.

Priya went to a restaurant and the waiter gave her a menu Card. The menu card showed the food items and the rate of each item.

Hotel foods			
S.No	Food items	Quantity (in Nos)	Price (in ₹)
1	Idly	2	20·00
2	Rava Dosai	1	50·00
3	Dosai	1	30·00
4	Poori	3	45·00
5	Masala vadai	4	20·00

Priya and her friend ordered the following items from the menu card.

Food items	Quantity
Idly	4
Dosai	3
Poori	6

Once they finished eating the waiter gave the bill.

Hotel foods			
Bill No: 32			Date: 30.10.2019
S.No	Food items	Quantity (in Nos)	Price (in ₹)
1	Idly	4	40·00
2	Dosai	3	90·00
3	Poori	6	90·00
Total Amount			220·00

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The bill shows the food items order by Priya and the total amount to be paid by her.

From the above bill, we come to know the following details:

i. Name of the Restaurant Hotel foods

ii. Bill number 32

iii. Date of the bill 30.10.2019

iv. Total number of items eaten 3

v. Total amount of money to be paid ₹ 220

vi. Rate of one idly ₹ 10

vii. Rate of one dosai ₹ 30

viii. Rate of one masala vadai ₹ 5

ix. Rate of two poori sets ₹ 90

1. The following are the items eaten by Raju and his family. Fill in the blanks using the given bill.

Hotel foods			
Bill No: 35			Date: 30.10.2019
S.No	Food items	Quantity (in Nos)	Price (in ₹)
1	Rava Dosai	4	200·00
2	Masala vadai	4	20·00
3	Poori	6	90·00
Total Amount			310·00

i. Name of the Restaurant _____

ii. Bill number _____

iii. Date of the bill _____

iv. Total number of items eaten _____

v. Total amount of money to be paid _____

3rd_Unit_05_Money_Term3.indd 40 18/10/2022 17:54:38

2. Complete the given bill and find the total amount to be paid.

Feel good garments

Bill No: 82 Date: 5.11.2019

S.No	Items	Rate (in ₹)	Quantity (in Nos)	Price (in ₹)
1	Saree	350·00	2	
2	Shirts	200·00	2	
3	Jeans	700·00	1	
4	Towel	50·00	2	
5	Shawl	100·00	1	
Total Amount				

Feel good garments

Bill No: 25 Date: 6.11.2019

S.No	Items	Rate (in ₹)	Quantity (in Nos)	Price (in ₹)
1	Dhothi	250·00	1	
2	Skirt	300·00	2	
3	Shirt	150·00	4	
4	Saree	500·00	3	
5	Tops	220·00	3	
Total Amount				

Eat good provisions

Bill No: 1045 Date: 6.11.2019

S.No	Items	Rate (in ₹)	Quantity (in Nos)	Price (in ₹)
1	Turmeric Powder	25·00/Pack	2	
2	Rice	55·00/kg	2	
3	Urad dhal	80·00/kg	2	
4	Sugar	42·00/kg	4	
5	Tamarind	110·00/kg	1	
Total Amount				

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3. Prepare Bills for the items purchased using the given rate chart.

Rate Chart in a stationary shop		
1.	Pen	₹. 20·00
2.	Pencil	₹. 10·00
3.	Chart	₹. 5·00
4.	Eraser	₹. 10·00
5.	Sharpner	₹. 5·00
6.	Stapler	₹. 50·00

i. Ramya bought two pens, three erasers and a sketch packets. Prepare a bill for her purchase.

ii. Ravi bought an eraser, a sharpener and two pens. Prepare a bill for his purchase.

Activity

Collect bills from different shops and prepare an album.

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UNIT-6



6.1 Times of a Day

Look at the sky. Is it same all the time ?

Sometimes the sun shines and sometimes the moon and the stars twinkle.

When the sun shines we call it day and when the moon and the stars twinkle we call it night.

12 hours of day time (sunlight) and 12 hours of night time (Darkness) comprises one day (24 hours).



1. Sort the events according to the time of happening

1. Sun rise
2. Sun set
3. Coming to school
4. Returning home from school
5. Breakfast
6. Dinner
7. Darkness outside
8. Say Good night
9. Say Good Evening

S.No.	Morning	Evening	Night
1.			
2.			
3.			

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6.2 Chronological Order

Have you noticed your mother preparing idly. How does she prepare it.

- First, she soaks rice and black gram in water.
- Second she grinds then to prepare a batter.
- Third she ferments the batter overnight
- Fourth she boils the batter to make idlies.

These events occur in an order in the process of making idly.

The method of arranging events in the order of their happening is called **chronological order**.

Example of arranging things in chronological order.

- Historical event
- Education qualification
- Family tree

1. Write 'F' for the event which comes first and 'N' for the event which happens next.

S.No.	Event			
1	Eating		cooking	
2	Boarding into a bus or train		reaching the destination	
3	Drawing a picture		colouring	
4	Taking out a book from the bag		reading	
5	Opening the door		Entering the room	

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This is Kayalvizhi's family



Chronological order of her family members is **Grandfather, Grandmother, Father, Mother, Kayalvizhi, and her younger brother.**

2. Arrange the following events in chronological order.

i. Started walking, birth, started schooling in class 1, studying in Class 3, studying in Class 2.

ii. Sowing seeds, plucking fruits, growing fruit, flowering in plant, watering plants.

3rd_Unit_06_Time_Term 3.indd 45 9/2/2022 2:47:30 PM

3. Write the names of the your family members in the chronological order.

Ask the brith years of your family members and arrange them chronologically.

6.3 Time cyclic events in a year

Every day we wake up in the morning and go to bed at night time.

This process keeps on repeating every day.

Every day the sun rises in the morning and sets in the evening .

Events that keep on repeating in the same manner (without much difference) refers a cycle.



Day and night occurs alternatively forms a cycle.

Some events like growth of a plant, construction of a house do not repeat. These events do not form a cycle.

1. List the events that form a cycle and that do not form a cycle.

i. Coming to school
ii. Rotation of a clock
iii. Days of a week
iv. Growth of your pet
v. Building your house
vi. Making of idly

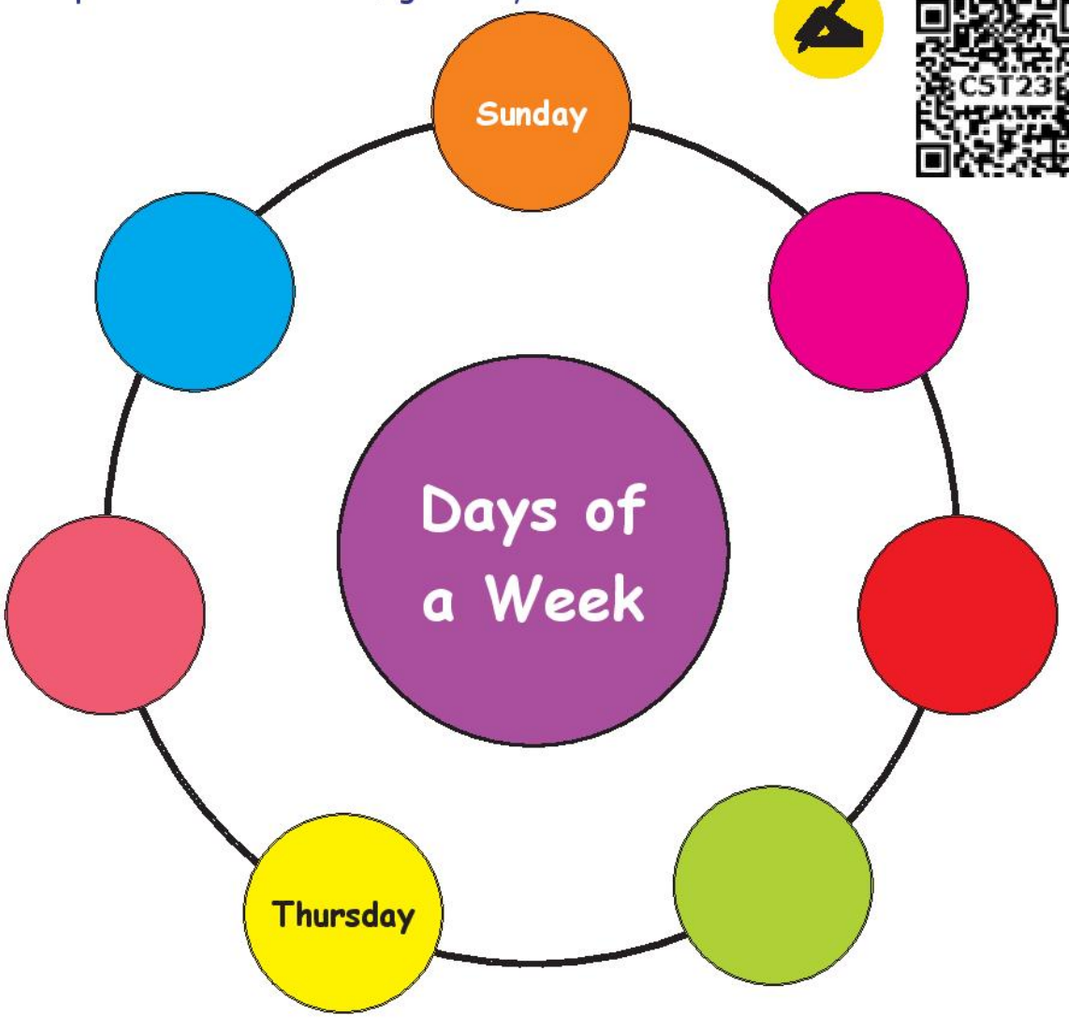
S.No.	Events that form a Cycle	Events that do not form a Cycle
1.		
2.		
3.		

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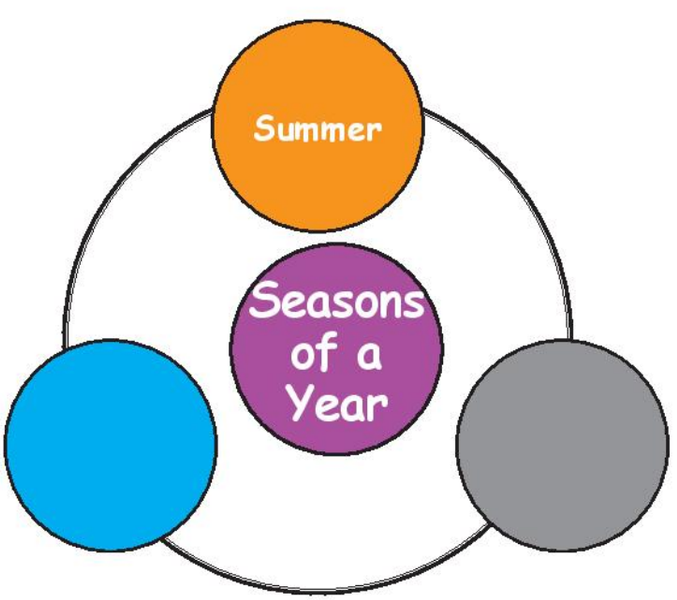
2. Complete the events of given cycle

C5T23

i.



ii.

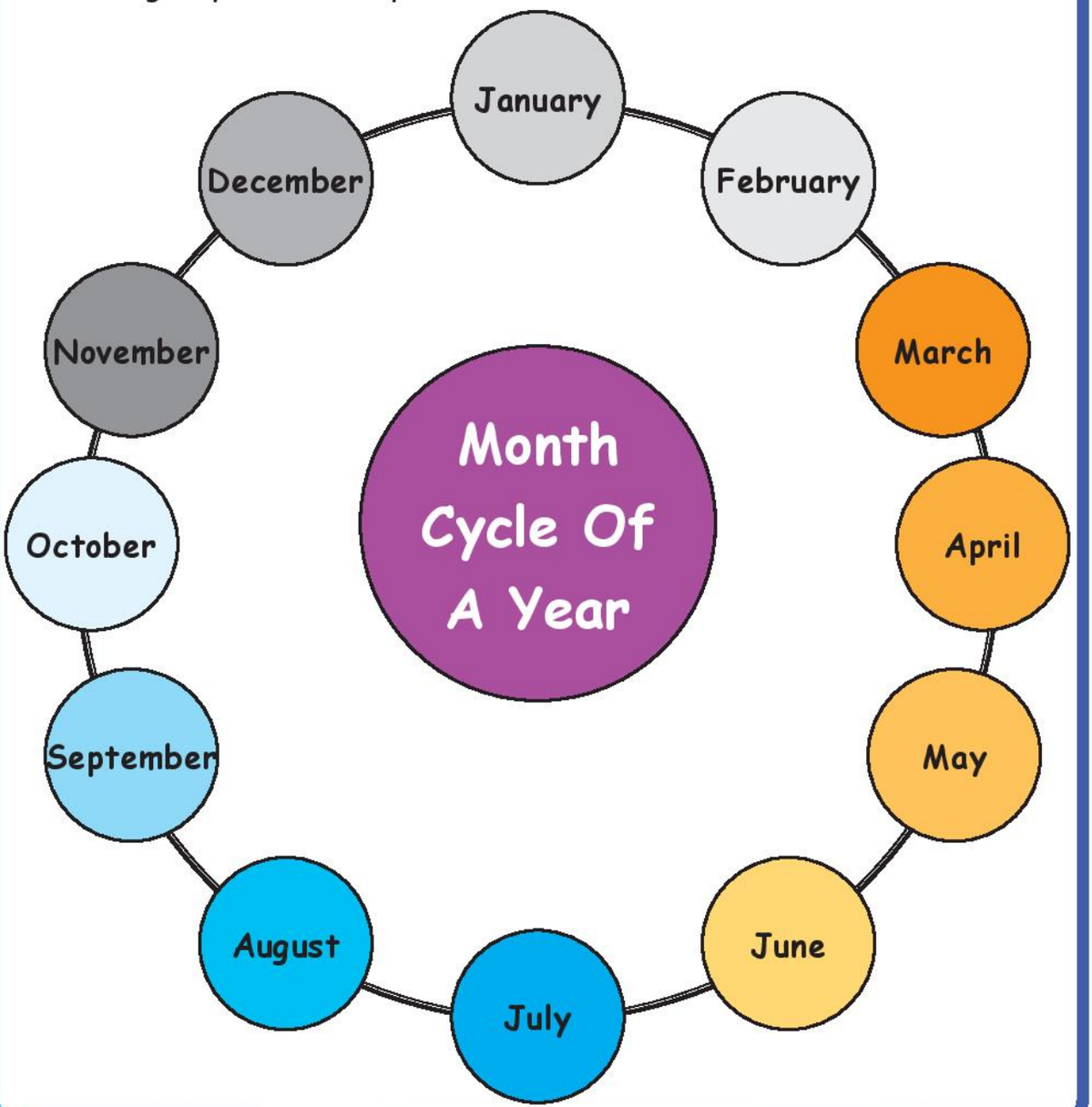


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Activity

Preparing month cycle of a year.

- The Teacher can prepare cards with names of months.
- Divide the class into groups according to the strength.
- Give one set of cards to each group. Each set of cards should be shuffled
- Ask the group to arrange the cards in the correct cycle of months. The group which completes the task first will be the winner.



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UNIT-7

2 Information Processing



7.1 Quick Ways of adding

We perform addition of numbers in many situations daily. Let us learn some tricks which help us to add numbers quickly.

1. Using addition table is one of the good ways to add small numbers.

2. Let us know some facts in addition

i. Adding 0 to a number

A number remains the same when you add 0 to it.

ii. Adding 1 to a number

When 1 is added to a number it gives the next number.

iii. Adding 2 to a number

When 2 is added to a number the numbers jumps or skips over 2 next to it.

iv. Adding 10 to a number

When 10 is added to a number its ones place remains the same and digit in 10 place is increased by 1 i.e., moves to the next number.

Complete the table

+	0	1	2	10
1	1	2	3	11
3				
4				
9		10		
12				
25	25			
73				
86			88	
325				
791				
228				238
998		999		

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3. Finding the pairs of 10

When a set of numbers are given to add, We shall find the pairs of numbers gives the sum 10 and add them.

Example Find the sum of 7+4+6+3

7+4+6+3

7+3=10 and 6+4=10

Hence the sum of the numbers =10+10=20

Example Find the sum of 5+3+2+6+4

5+3+2+6+4

6+4=10 5+3+2=10

Hence the sum = 10+10=20

Exercise

Find the sum of i) 5+1+5+9 ii) 2+5+5+7+1 iii) 3+6+1+2+8

4) Doubling

i. We shall double a number when we add the same number twice.

Example 5 + 5 = 2 X 5 = 10

7 + 7 = 2 X 7 = 14

ii. We shall also use doubling when we add nearer numbers.

Example 5 + 6 = 2 X 5 +1 = 10 + 1 = 11

4 + 5 = 2 X 5 -1 = 10 - 1 = 9

5. Adding two digit numbers

Add the ones and skip count the 10 s

Example Find the sum of 7+ 12.

7 and 2 gives 9.

From 9 skip count in tens to get the sum 19.

7 + 2 = 9 9 + 10 = 19

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Example Find the sum of 25 + 33.

Adding ones 5 + 3 = 8

Skip counting 8 + 30 + 20 =58

EP75M

Example Find the sum of 37 + 24.

Adding ones 7 + 4 = 11

Skip counting 11 + 30 + 20 =61

6) Adding three digit numbers

Example Find the sum of 576 + 323.

Suppose, we need to add the following numbers, We shall follow these steps to add them quickly.

Step: 1 - Expand the number 500 + 70 +6

300 + 20 + 3.

Step: 2 - Add the hundreds 500 + 300 = 800

Step: 3 - Add the tens one by one 800 + 70 =870

870 + 20 = 890

Step: 4 - Add the ones one by one 890 + 6 =896

896 + 3 = 899

500	70	6
300	20	3
800	890	899

Add the given numbers using the above method.

	H	T	O
	5	4	3
+	2	1	0

	H	T	O
	2	9	8
+	5	0	1

	H	T	O
	7	9	8
+	6	5	4

	H	T	O
	3	4	8
+	6	8	1

	H	T	O
	5	4	3
+	2	1	8

	H	T	O
	7	1	6
+	5	4	0

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7.2 Quick Ways of subtracting

We shall learn some tricks in subtraction also.

1. We shall use the subtraction table to subtract small numbers

2. Some facts in subtraction

subtracting 0 from a number

A number remains the same when you subtract 0 from it

Subtracting 1 from a number

When 1 is subtracted from a number, it gives a number before that number.

Subtracting 2 from a number

When 2 is subtracted from a number, the number moves 2 steps backward

Subtracting 10 from a number

When 10 is subtracted from a number its ones place remains the same and digit in 10 place is decreased by 1 i.e., moves to the previous number.

Complete the table

-	0	1	2	10
21	21	20	19	11
23				
24				
29		28		
12				
25	25			
73				
86			84	
325				
791				
228				218
998		997		

3. Subtracting same numbers

Subtracting a number from itself will give the difference 0.

Example Find the difference of 978-978 = 0

4. Subtracting numbers ending with 0

Subtract 1 from both numbers and then do the actual subtraction

Example Find the difference of 340 - 229

H	T	O
3	4	0
- 2	2	9
1	1	1

(-1), (-1)

H	T	O
3	3	9
- 2	2	8
1	1	1

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Example Find the difference of 1000-574

T	H	T	O
1	0	0	0
-	5	7	4
	4	2	6

-1 → -1 →

H	T	O
9	9	9
- 5	7	3
4	2	6

1THB7

As we subtract 1 from both the numbers, the answer of the new numbers and question are same.

Subtract the given numbers using the above facts.

H	T	O
5	4	3
- 2	1	0

H	T	O
2	9	8
- 1	0	1

H	T	O
7	9	8
- 6	5	4

H	T	O
3	4	8
- 1	1	1

H	T	O
5	4	3
- 2	1	8

H	T	O
7	1	6
- 5	4	0

H	T	O
4	5	0
- 3	4	9

H	T	O
5	6	0
- 3	2	5

H	T	O
9	8	0
- 5	7	5

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Mental Arithmetic:

Able to add and subtract single digit numbers and two digit numbers mentally:

1. In a tree planting ceremony, 6 coconut saplings and 5 neem saplings are planted. Find the total number of saplings planted.

2. There are 5 tender coconuts in a tree. If they pick 3 tender coconuts, then find the remaining tender coconuts.

3. 46 boys and 27 girls visited a park on Sunday. Find the total number of boys and girls visited the park.

4. 50 pens are in a box. Out of which, 34 pens are given to the students. Find the number of pens left.

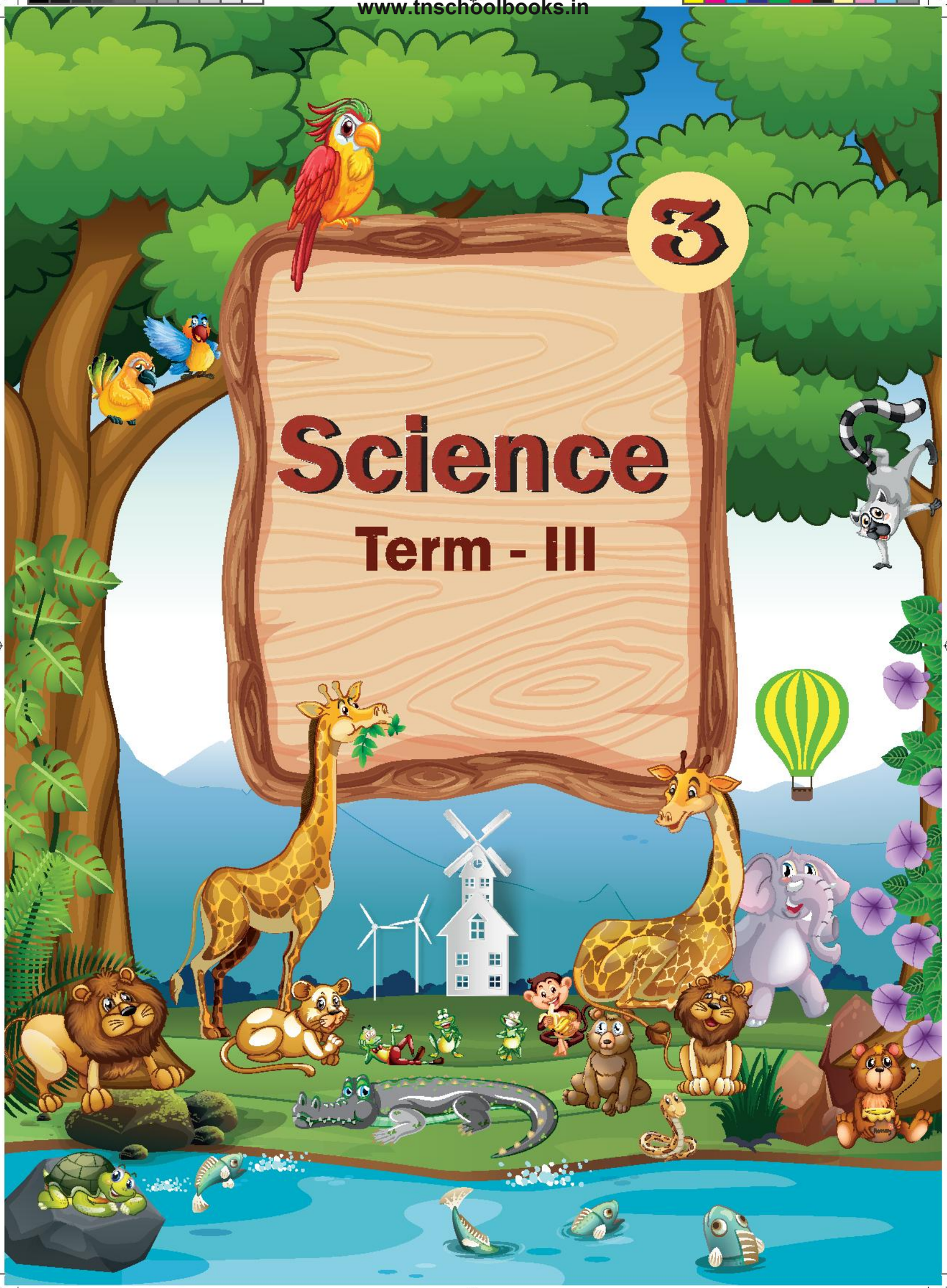
5. 70 balls are given to 7 persons. How many balls are given to each person?

6. 8 books can be arranged in a row. In how many rows can 48 books be arranged?

7. 10 pens can be kept in a box. How many boxes are needed to keep 100 pens?

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Science

Class 3 (Term III)

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Unit 1

Our Environment



Learning Objectives

SZKJ8

At the end of the lesson the students will be able to

- differentiate biotic and abiotic factors
- understand the interaction between biotic and abiotic factors
- understand balanced ecosystem
- understand the importance of planting trees

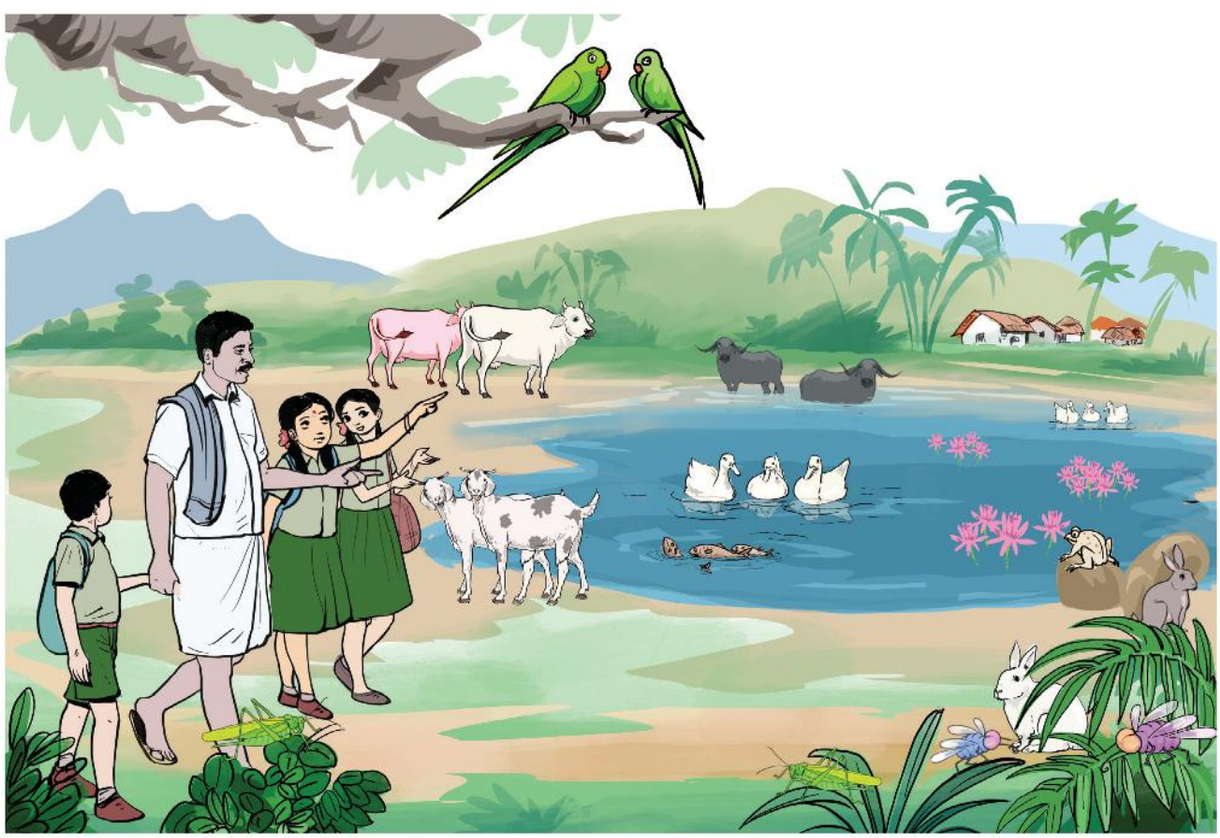
I. Environment - Introduction

(Yazhini and her friends are going to school with her father)

Yazhini : Daddy! Look at the parrots! How beautiful they are!

Father : Yes Yazhini. They used to stay on the trees near the pond.

Fathima : Uncle! Uncle! Can you please take us there?



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Stephen : Yes uncle. Shall we go and have a look at them?

Father : Oh! Yes!

(They are walking towards the pond)



Yazhini : We should be quiet while walking, as there are not only parrots on the trees but also ant, spider, squirrel, myna and monkey.

Fathima : Oh! Oh! Look at the fish and frog in the pond. I can see a turtle too.

Father : Yes! See how they live in the same place depending on one another.

Stephen : See there, goat and cow are grazing near the pond.

Father : Children, we are getting late. We shall go to school.

Children : Yes uncle. Thank you very much for showing us this beautiful place.

Let Us Try

1. Write the names of the animals that you see in the previous page picture..

_____ _____ _____

_____ _____ _____

_____ _____ _____.

2. Classify the following into natural things and man-made things.

(Dam, river, coconut tree, building, jasmine flower, hill, cloud,silver vessel, cell phone, temple, cake, air, sun, ship, water, pencil, book, doll, football, sunflower, crocodile, aeroplane)

Natural things	Man-made things

Let Us Enjoy

Shall we mimic like the animals?

Crow, Cuckoo, Elephant, Parrot, Donkey, Cow, Goat, Dog

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Let Us Connect

Match the following sources with their products and uses.

	Sources	Products	Uses
1.		Wind Energy	Jewellery
2.		Minerals	Furniture
3.		Wood	Electricity
4.		Wool / Leather	Food
5.		Paddy	Clothes

II. Environmental Factors

Our environment consists of everything around us. It has living and non-living things. We are surrounded by **living things** such as plants and animals and **non-living things** such as water bodies, sunlight, air and soil.

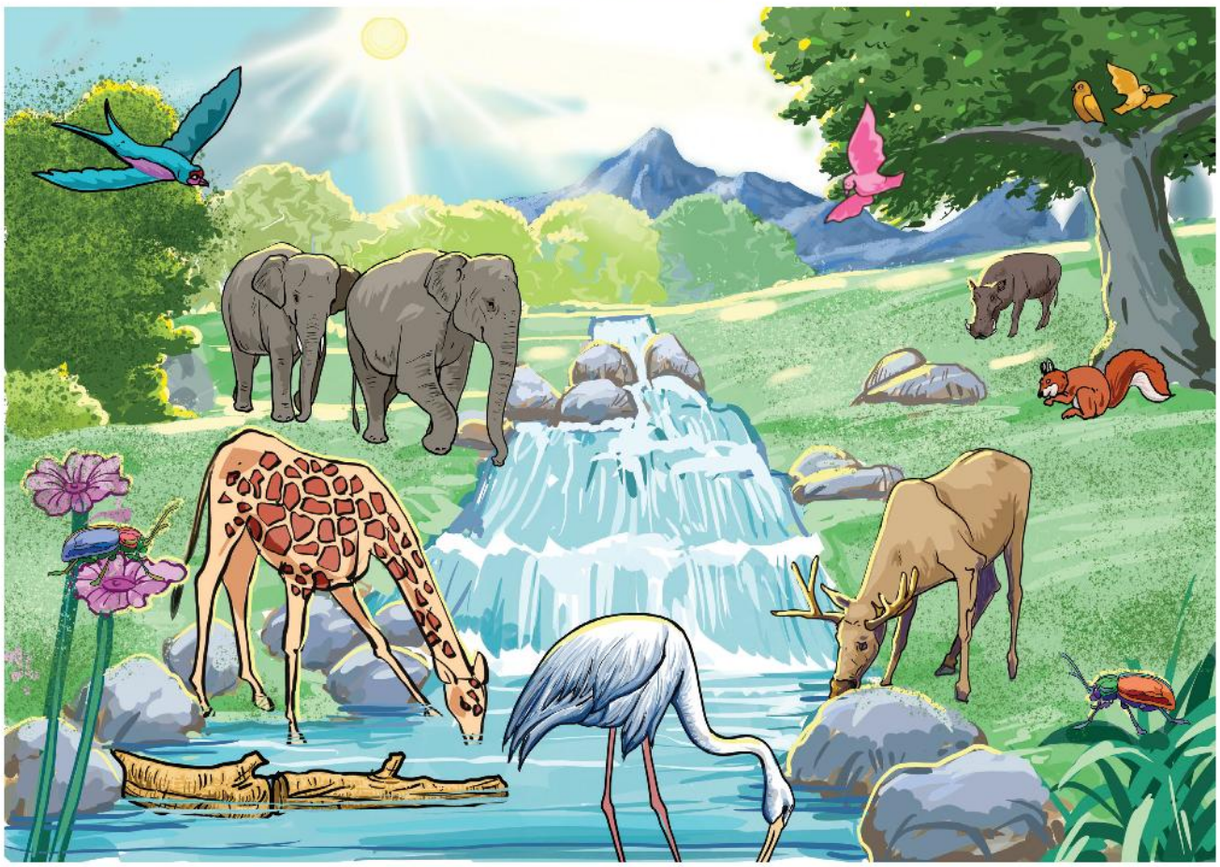
The living and non-living things in our environment interact with one another. Our environment is a **wonderful gift** to us given by the **nature**.

More to know

Environmentalist - A person who care and protects the environment. As an environmentalist, you can volunteer to protect plants and animals.

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Our environment has two main factors: They are

(i) Biotic factors (ii) Abiotic factors

Biotic Factors

Living things in our environment are called biotic factors. **E.g.,** Lion, Plantain, Dove, Human beings etc.









Abiotic Factors

Non-living things in our environment are called abiotic factors. **E.g.,** Air, Soil, Water, Sunlight, Temperature etc.









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Difference between biotic and abiotic factors

Biotic Factors (Living things)	Abiotic Factors (Non-living things)
They can breathe and grow	They cannot breathe and grow
They need food to live	They do not need food to live
They can feel	They cannot feel
They give birth to young ones	They do not give birth to young ones

Do you Know?

Plants cannot move around like animals. But they grow and their shoots show movements towards the sun. So, the **plants are also biotic factor.**

More to know



Amoeba is an unicellular organism.
It has the ability to alter its shape.
It was discovered in 1755.

Let Us Try

1. Classify the following as Living / Non-living things.

	Living	Non-living
Plants, Chair, Fish, Elephant, Washing machine, Peacock, Book, Glass, Chalk piece, Cat, Rain, Frog, Watch, Man, Pen, Lion, Water.		

2. Think and Answer

a. A swing goes to and fro. Is it living or non-living? _____

b. We get wood from trees which are the living things. A chair is made from wood. Is the chair a living thing or a non-living thing? _____ .







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Try to Answer

Look at the picture and answer the question.



Which of the non-living thing can float?

a. Iron rod

b. Stone

c. Air filled ball

d. Coin

Let Us Try

Identify and write the characteristic features of living things using the given hints.

(Characteristics Hints: Movement, Breathe, Feel, Eating, Grow, Reproduce)

Statements	Characteristics features
Touch-me-not plant closes its leaves when it is touched	
A papaya seed becomes a papaya tree	
A dove flies in the sky	
A cow eats grass	
A cat gives birth to kittens	
Human beings and animals breathe in and breathe out air	

Let Us Play

Divide the class into two groups and ask the first group to write any five biotic factors and the second group to write any five abiotic factors seen around the school.

Biotic factors	Abiotic factors

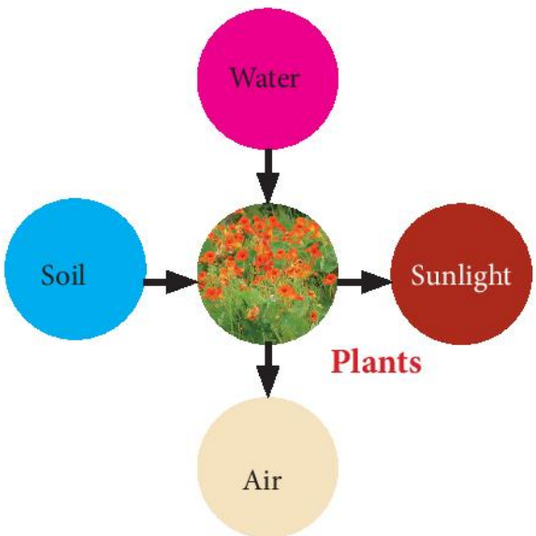
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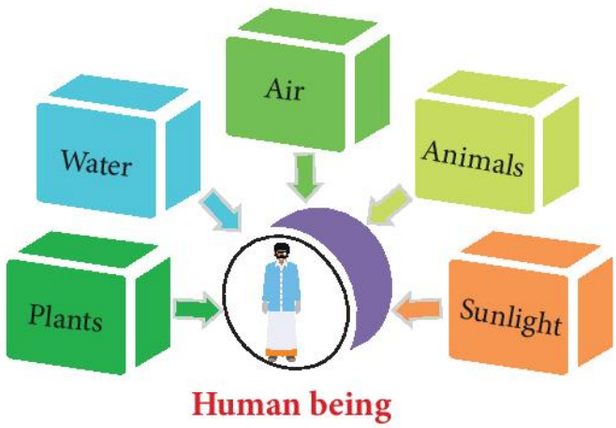
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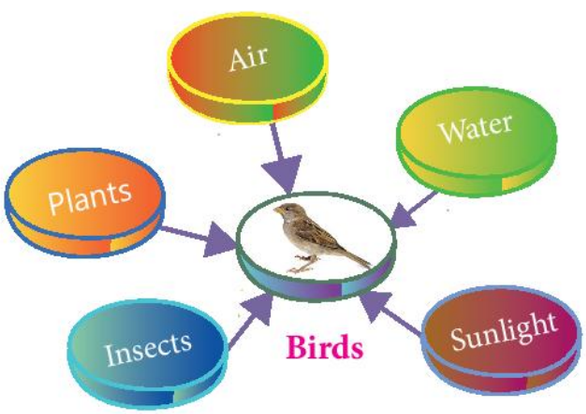
III. Interaction between biotic and abiotic factors

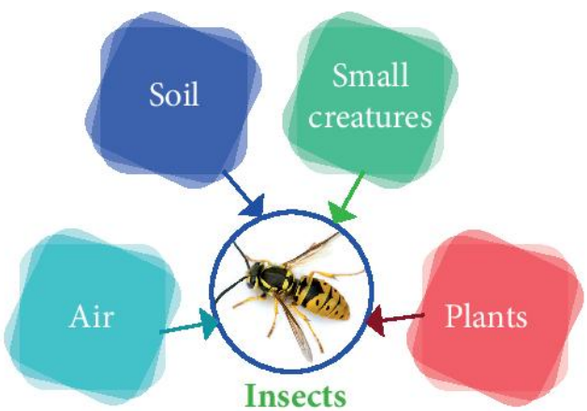
All biotic factors depend upon abiotic factors for their living. Biotic and abiotic factors are **linked to each other by the flow of energy through food.** Plants are the most important among all the living things. Because they only can produce food from abiotic factors like air, soil, water and sunlight.

A few examples for interaction between biotic and abiotic factors are given below.









From the above picture we understand that plants need water, soil, air and sunlight to live.

Write the abiotic factors required for the following.

1. Birds : ---------- , ---------- , ---------- , ---------- , ----------.

2. Insects : ---------- , ---------- , ---------- , ---------- , ----------.

3. Human beings: ---------- , ---------- , ---------- , ---------- , ----------.

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More to know

Ecology is the science that deals with the relationship between living things and their environment.

Let Us Discuss

1. There is a large banyan tree in a park. Monkeys and birds have made the tree their home. Humans too spend time under the tree. Discuss with your friends, how the tree, monkeys, birds and humans are interdependent.

2. Why the plant is most important living thing?

_____.

3. Discuss how the biotic and abiotic factors interlink with each other and record your views.

Let Us Try

1. Write the factors needed for the following to survive.

(Air, Water, Sunlight, Soil, Wheat, Fruits, Grass, Hen)

a. Animals: _____

b. Plants: _____

c. Human beings: _____

2. Observe the picture and write the living and non-living things in present in it .



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IV. Balanced Ecosystem

Imagine an environment where there are only plants, deer and lions.

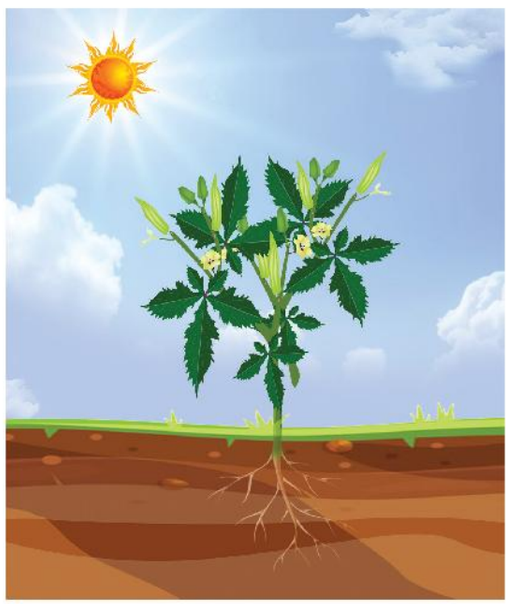
- What will happen to the deer, if there are no lions in an environment?
- What will happen to the plants if there are no lions to eat the deer?
- If there is no plant in an environment, what will happen to the deer?

It is important for the food chain to exist in any ecosystem to make sure that the energy flows between the biotic and abiotic factors. A balanced ecosystem supports animals, plants and microorganisms to grow in their environment. **An ecosystem is balanced, when the biotic and abiotic factors are able to cycle the energy and food as per their need.**

The biotic factors in an ecosystem includes **producers, consumers and decomposers.**

1. Producers

The living things that can prepare their own food are called producers. **Green plants** are the **producers**. They make their own food by the process of **photosynthesis**. Hence, they are called **primary producers**. Including human beings all animals depend on plants for their food.





More to know

A few plants **do not produce their own food** and they depend on other plants. They are called **parasitic plants**. E.g., **Cuscuta**

2. Consumers

The **living things that eat the food prepared by the producers** are called **consumers**. Most of the living things depend directly or indirectly on producers for their food. Consumers can be divided into **three types** based on their food as **herbivores** (plant eating animal), **carnivores** (flesh eating animal), **omnivores** (both plant and flesh eating animal).







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3. Decomposers

Organisms that **feed on the wastes, dead plants and animals** are called decomposers. They return the nutrients to the soil.

E.g., Bacteria, Fungi.


Bacteria

Let Us Try Classify the following biotic factors.

(Tulsi, Fungi, Mango tree, Rabbit, Eagle, Cat, Dog, Cucumber plant, Human, Grass, Crocodile, Crow, Bacteria)

Producers : ----------, ----------, ----------, ----------, ----------

Consumers : ----------, ----------, ----------, ----------, ----------

Decomposers : ----------, ----------, ----------, ----------, ----------

Let Us Discuss 1. Let us discuss and write.

Plants and human beings are living things. Why do human beings depend on plants?

_____

_____

2. Divide the students into three groups and give them some pictures of living things. Ask them to classify the pictures based on their food habits.
3. Take your students outside the classroom or to a park. Ask them to note down the producers and consumers they could identify there.

Let Us Try Find and circle the biotic and abiotic factors given in the table.

O	R	X	S	E	P	L	A	N	T
A	T	Y	E	N	O	U	F	C	S
N	R	Z	A	U	N	L	A	K	E
I	E	S	N	L	D	E	S	E	A
M	E	P	M	L	T	W	U	S	J
A	R	E	T	A	W	Z	N	B	H
L	Q	M	B	N	W	A	T	E	R
E	E	R	T	D	I	Y	E	L	X

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Let us Connect

Link the animals as herbivores, carnivores and omnivores.

Cow	Omnivore	Lion
Bear	Carnivore	Elephant
Tiger	Herbivore	Crow

V. Plant Sapling

A young plant with a thin stem is known as a sapling. Survival of living things is impossible without plants. Planting and taking care of plants lead to a good environment.

Benefits of plants



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"VAN MAHOTSAV"

Van Mahotsav means, **"Festival of forests"**. It is an annual tree planting movement. This movement began in India in July 1950.This festival is organised during the **first week of July** every year.

To **create awareness** among the people, we can give saplings during celebrations, family functions and national festivals. We can also plant saplings **on our birthday.**



More to know

Some important initiatives to protect our environment.

The Chipko Movement - 1973

Appiko Movement - 1983

The Environment Protection Act – 1986

National Green Tribunal – 2010

Let Us Do

A. Write any two uses of trees.

1. _____
2. _____

B. Conduct an awareness campaign on 'Save Our Environment'.

C. Plant saplings in your school campus.

D. Preparation and distribution of the seed balls.

Take some clay, humus, add water and mix well. After mixing, place the available seeds inside them and make a seed ball. Then dry and keep it safe. Distribute the seed balls to public on special occasions of your school.

E. Write some slogans on 'Save Plants' and paste them on the tree in your school campus/road sides. (E.g., Take care of the Earth and it will take care of you. It's not yours, nor mine, it's ours)

1.

2.

The nature of our future depends on the future of our nature.

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EVALUATION

TPVG6

I. Choose the correct answer.

1. Which of these is an example for living thing ?
   a. Water b. Goat c. Air

2. Our environment is surrounded by_____.
   a. biotic factors b. abiotic factors c. both biotic and abiotic factors

3. Human beings depend on _____ for their food.
   a. plants b. soil c. wood

4. _____ are the primary producers.
   a. Non green plants b. Green plants c. Cuscuta

5. Which is an example for decomposer?
   a. Mango tree b. Bacteria c. Deer

6. Which of these living things would die if there were no green plants on earth?









(a) a and c only (b) b and d only
(c) d and a only (d) a, b, c and d

II. Fill in the blanks.

1. _____ is a consumer. (Cow / Soil)
2. A young plant is known as _____. (tree / sapling)
3. Planting of sapling provides _____. (oxygen / land)
4. World Environment Day is _____. (June 15th / June 5th)
5. _____ get food from dead plants and animals. (Decomposers / Producers).

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III. Match the following.

1.	Stone	-	Consumer
2.	Bacteria	-	Abiotic factor
3.	Plants	-	Decomposer
4.	Buffalo	-	Producers

IV. Say true or false.

1. Abiotic factors are important for biotic factors.
2. River is an example for biotic factor.
3. 'Van Mahotsav' is organised during the first week of July every year.
4. Plants are the consumers.
5. Plants provide food and shelter to living things.

V. Answer the following.

1. Vijay placed two things 'P' and 'R' (one living and one non-living) in separate cages with food and water.

Number of weeks	Weight of 'P'	Weight of 'R'
Week 1	2 kg	1.5 kg
Week 2	4 kg	1.5 kg
Week 3	6 kg	1.5 kg
Week 4	8 kg	1.5 kg

   a. Which thing is likely to be a living thing? Give reason for your answer.

   b. What will be the weight of living thing in week 6?

2. Write two examples for biotic and abiotic factors.
3. Write any three differences between living and non-living things.
4. List the abiotic factors needed for insects.
5. What are the biotic factors of a balanced ecosystem?
6. Why plants are called primary producers?
7. Write any four benefits of plants.

VI. Project

Make an album by collecting pictures of different kinds of biotic and abiotic factors.

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Unit 2

Animal Life



Learning Objectives

At the end of this lesson the students will be able to

- differentiate various habitats of animals
- understand the food procurement of animals
- identify the eating habits of animals in their surroundings
- know the mouthparts of birds and insects
- realize the importance of food chain and food web in the environment

3T5WL

Warm-up

Identify and write the names of the animals by using the keywords given.


Snail

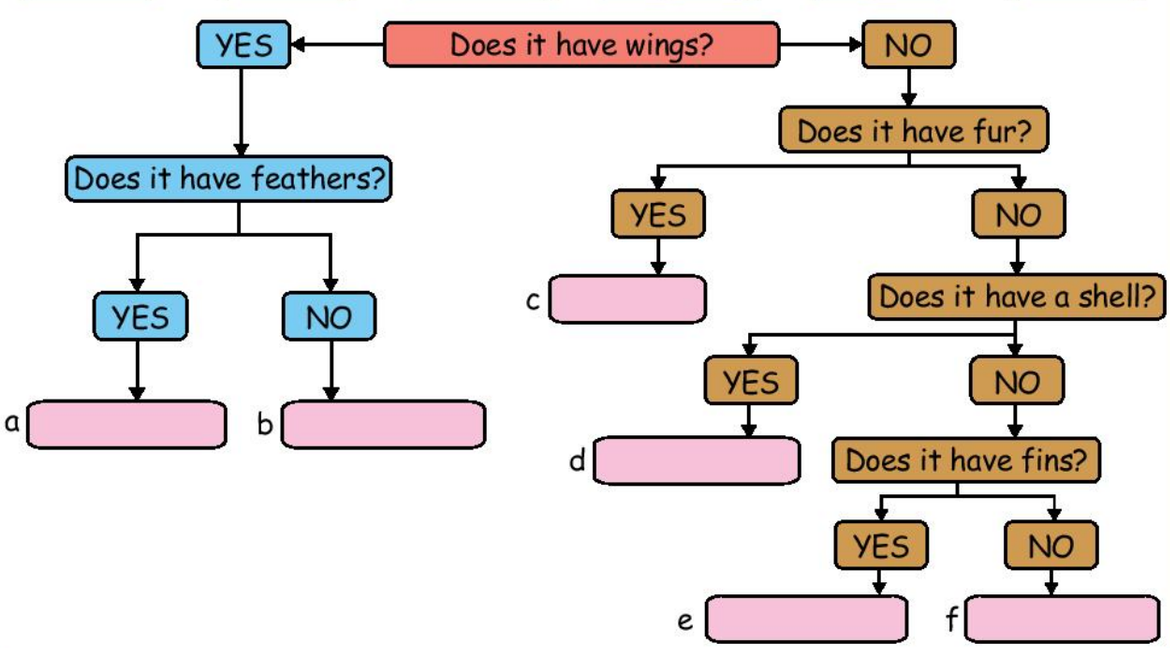

Parrot


Crocodile


Dragonfly


Tiger


Fish



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I. Animals in Different Environment

Our Earth provides place for lakhs and lakhs of animals to live. **The living place of an animal or a plant is called habitat.** The basic needs such as food, water, shelter and place to breed are found in a habitat.

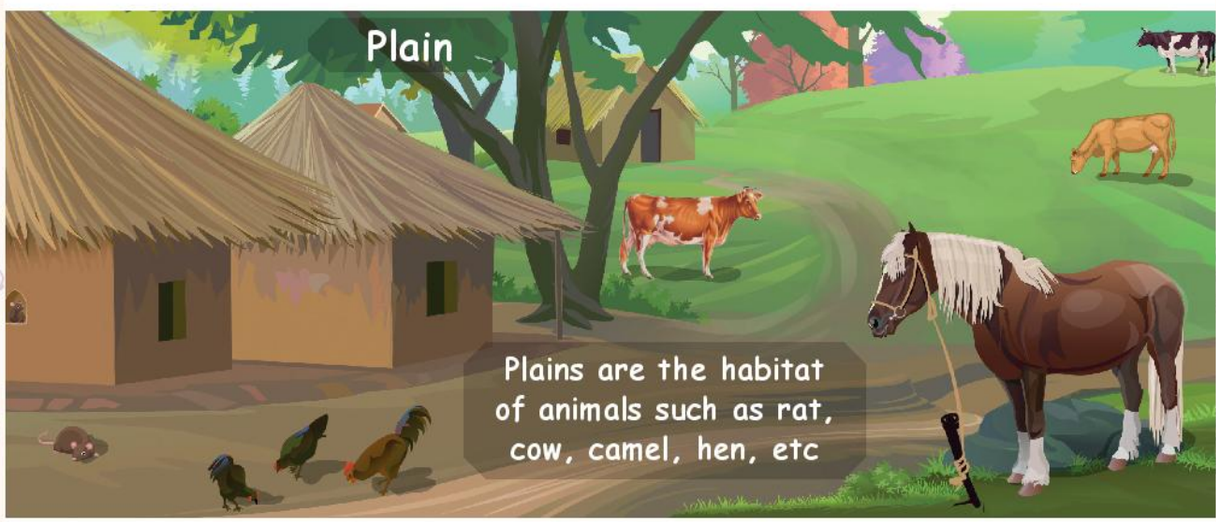
Habitat can be as big as a forest or as small as a leaf. Animals live in different conditions. For example, whales live in sea (water) and foxes live in forest (land).

Land (Terrestrial) Habitat

Animals that live on land are called **terrestrial animals.** E.g., Ants, Cats and Lion.

Some of the land habitats are:

1. Plains
2. Forests





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Water (Aquatic) Habitat

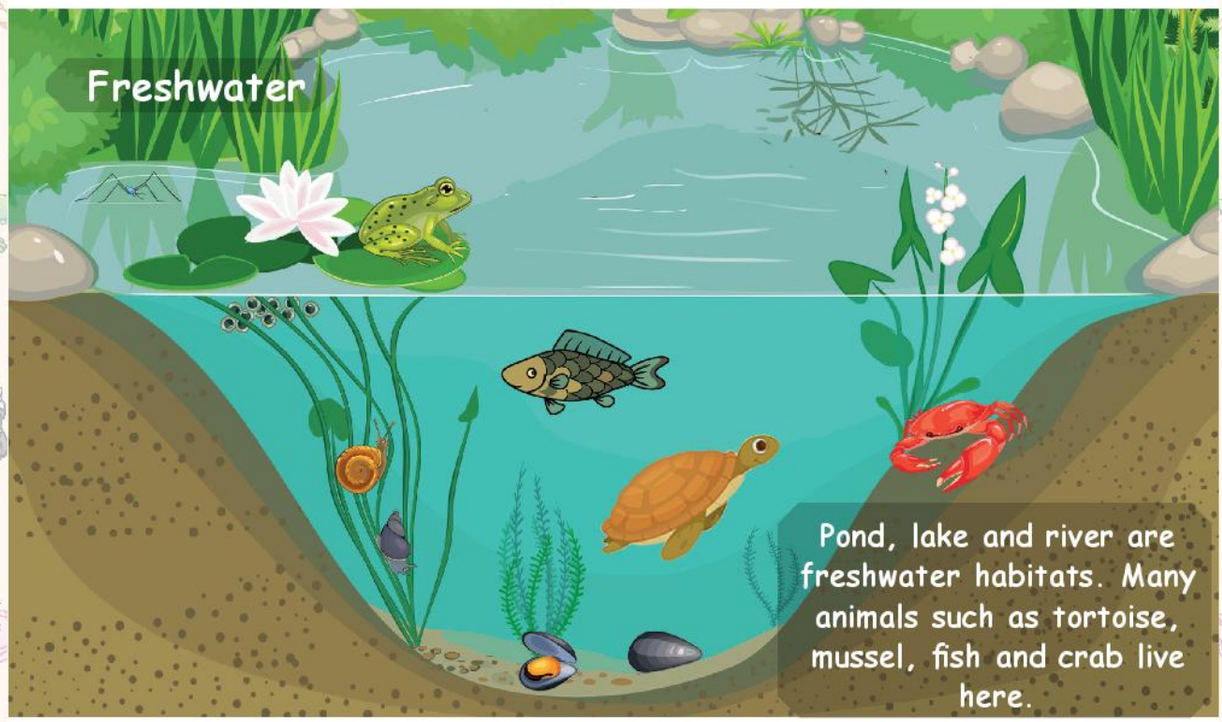
Animals that live in water are called **aquatic animals.** E.g., Fish, Dolphin and Crab.

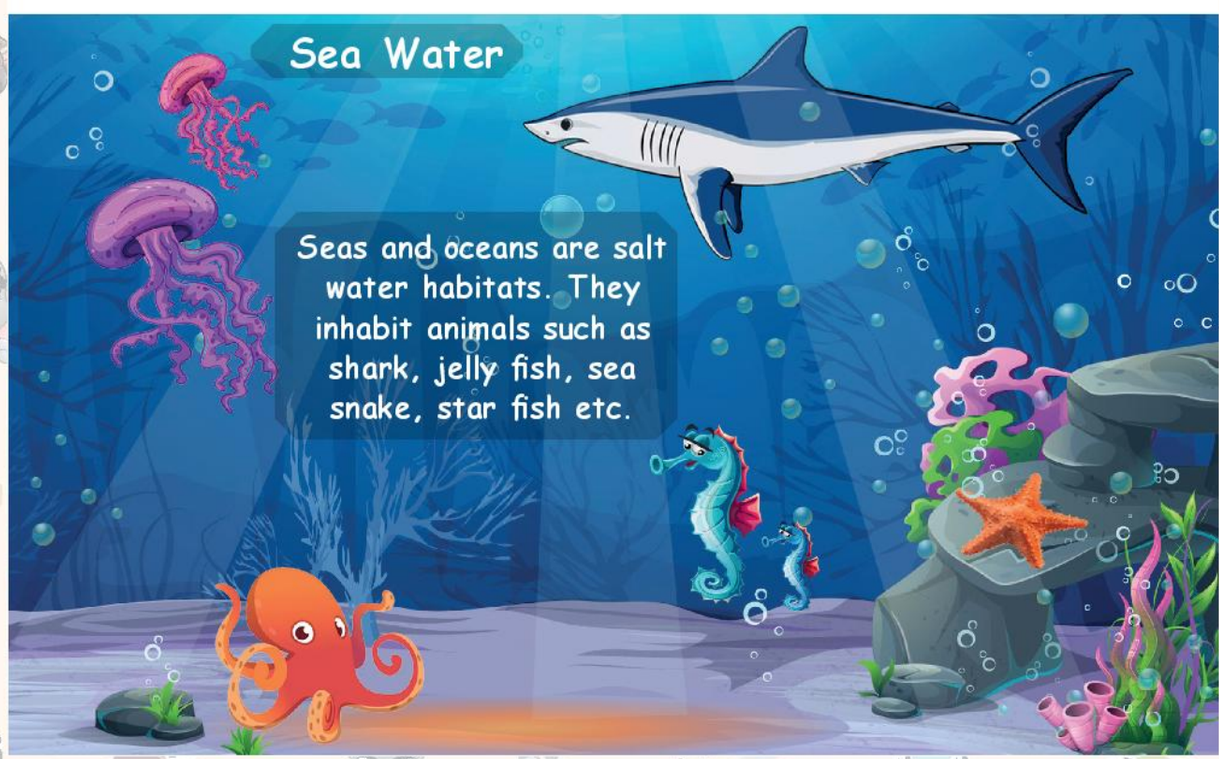
Water habitat is divided into two types:

1. Freshwater
2. Marine (Sea water)

Do you know?

World animal day is observed on 4th October.



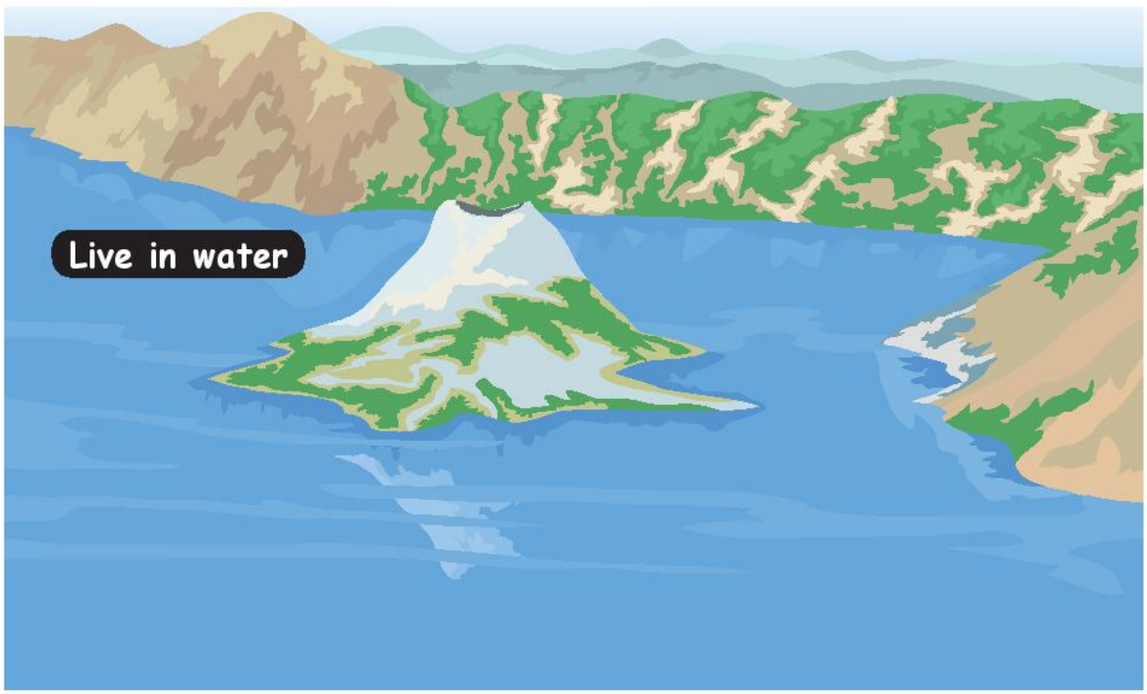


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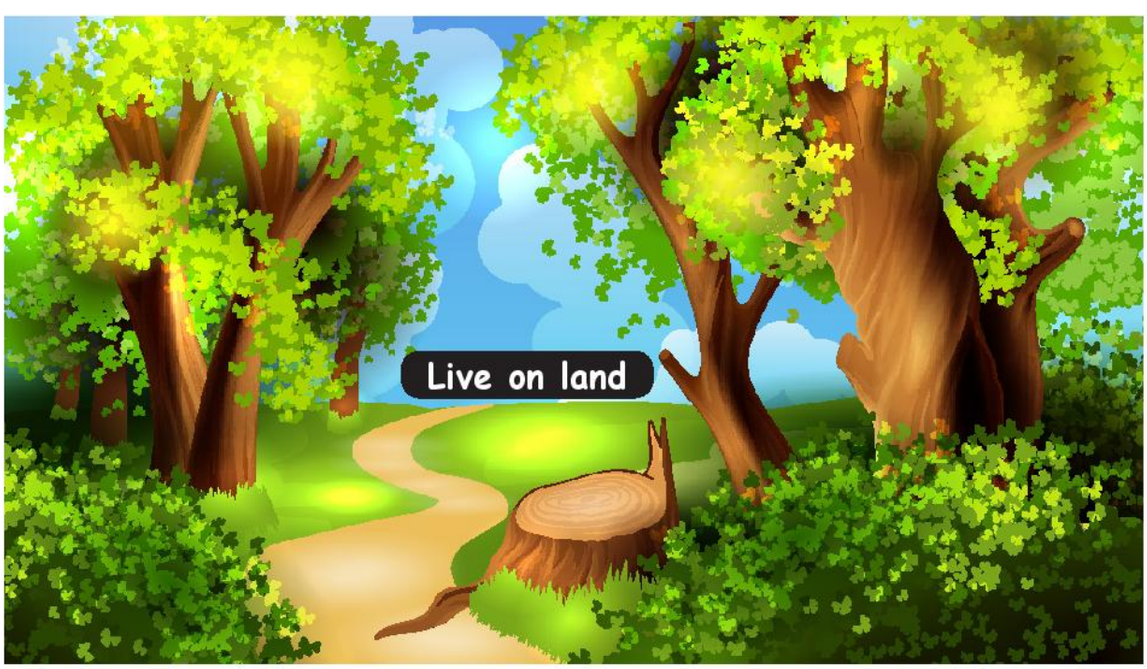
Let Us Connect

Link the animals that live in water and on land.



Pig | Mussel | Deer | Starfish | Dog | Whale | Frog | Tiger

Monkey | Crab | Camel | Horse | Seahorse | Lion | Elephant | Cow



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Let Us Help

There is a zoo near your town. Due to some reasons, they have to take the animals back to their habitat. Where will they take each of the following animals?

(Tiger, Crab, Turkey, Giraffe, Cat, Fish, Bear, Donkey, Camel, Crow, Zebra, Duck, Elephant, Tortoise, Pig, Peacock, Lion)

Plains	Forests	Ponds

Let Us Find

A) Circle the odd one based on habitat.

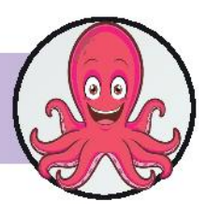
a. Lion, Elephant, Monkey, Whale

b. Shark, Dog, Jelly fish, Star fish

B) Write the names of the animal with the help of the clues given.

(Penguin, Whale, Octopus, Duck)

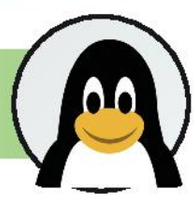
1. …… has eight arms. It lives in the ocean.





2. …… cannot fly, but it swims very well.

3. …… is the largest animal in the sea.





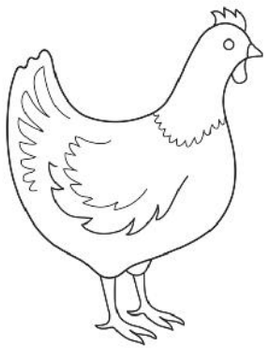
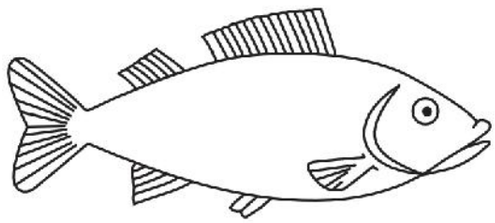
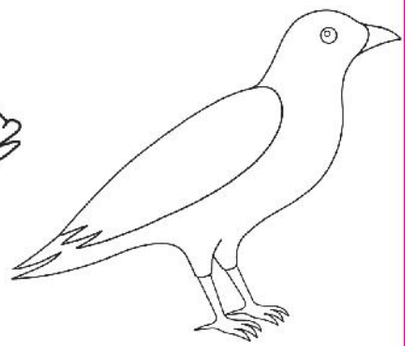
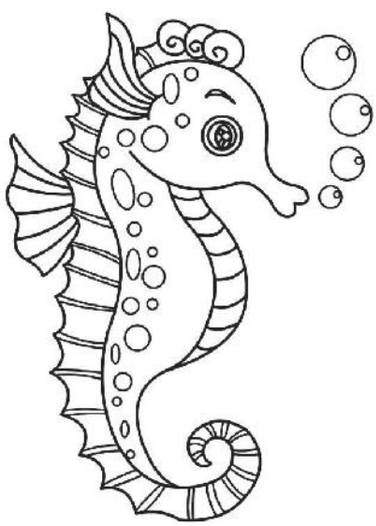
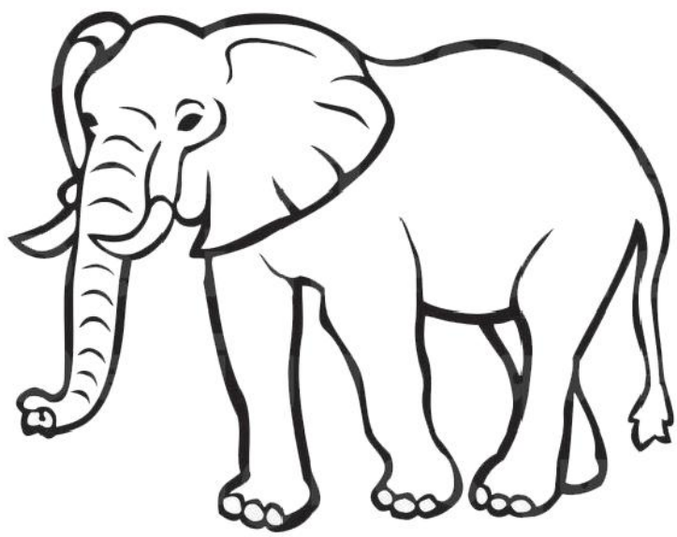
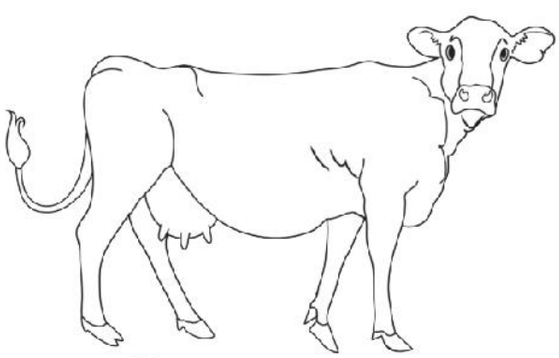
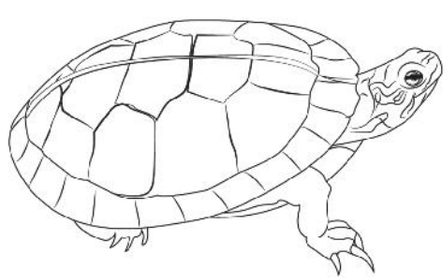
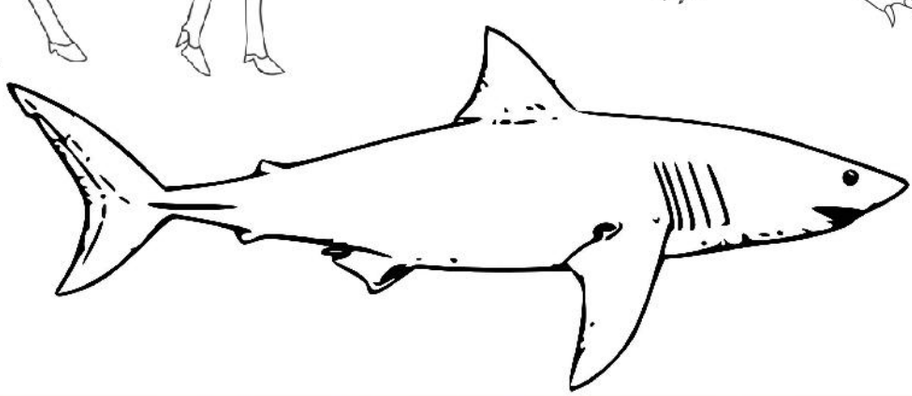
4. …… is a common water bird.

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Let Us Do

Colour the animals that live in water.

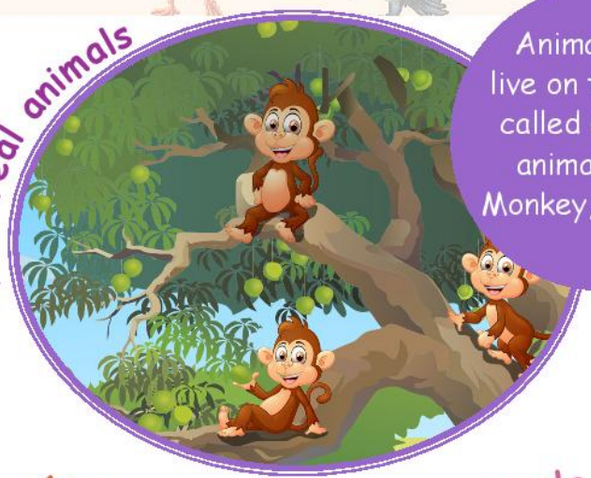









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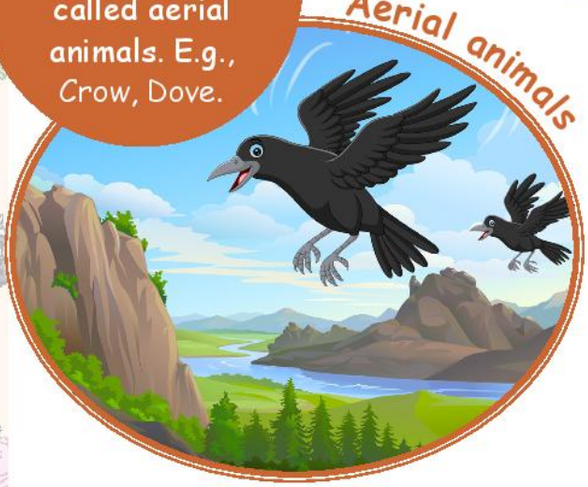
More to know

Arboreal animals



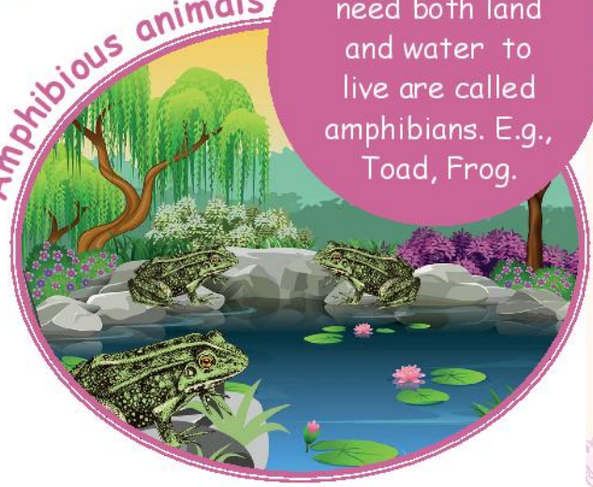
Animals that live on trees are called arboreal animals. E.g., Monkey, Squirrel.

Aerial animals



Animals that can fly most of the time are called aerial animals. E.g., Crow, Dove.

Amphibious animals



Animals that need both land and water to live are called amphibians. E.g., Toad, Frog.

Let Us Connect

Match the animals with their living place.



Forest

Polar region

Salt water

Fresh water

Desert



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Let Us Connect

Match these animals with their homes.







Honeybee

Spider

Lion

Fish

Bird

Earthworm







II. How do animals get their foods?

Write the foods of given animals using the following words.

(Carrot, Deer, Milk, Grass, Grain)











....

Think and share. Why should animals depend other living things for their food?

Animals cannot make their own food. They depend on plants or other plant-eating animals for their food. They move in search of food.

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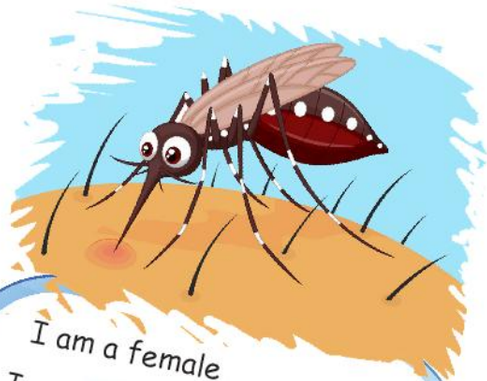
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Let us discuss the following and complete the sentence.

(earthworm, butterfly, mosquito, spider, elephant, lion, hen)



I am a _____.
I am the king of the forest.
I eat animals like deer, zebra and giraffe by hunting them.



I am a female _____.
I suck blood from animals. But males of my family feed on plant juices.



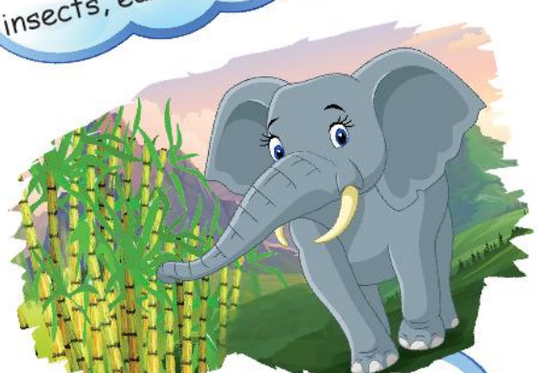
I am a_____.
I suck honey from flowers.



I am a _____.
I eat cereals, small insects, earthworms etc.



I am a _____.
I eat small insects that fall in my web.



I am an _____.
I feed on coconut leaves, sugarcane, banana etc. I use my trunk to take my food.



I am an _____.
I ingest soil with organic wastes and microbes.

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Let Us Connect

Help the animals to find their food. Use different colour for each animal.



Let Us Do

Complete the worksheet using the following hints.

Tiger, Lizard, Deer, Dove, Honeybee, Butterfly, Goat, Fox, Squirrel, Woodpecker.

Worksheet

Name : _____ Date : _____

1. Grain eating animals : _____ , _____
2. Plant eating animals : _____ , _____
3. Flesh eating animals : _____ , _____
4. Honey eating animals: _____ , _____
5. Insect eating animals: _____ , _____

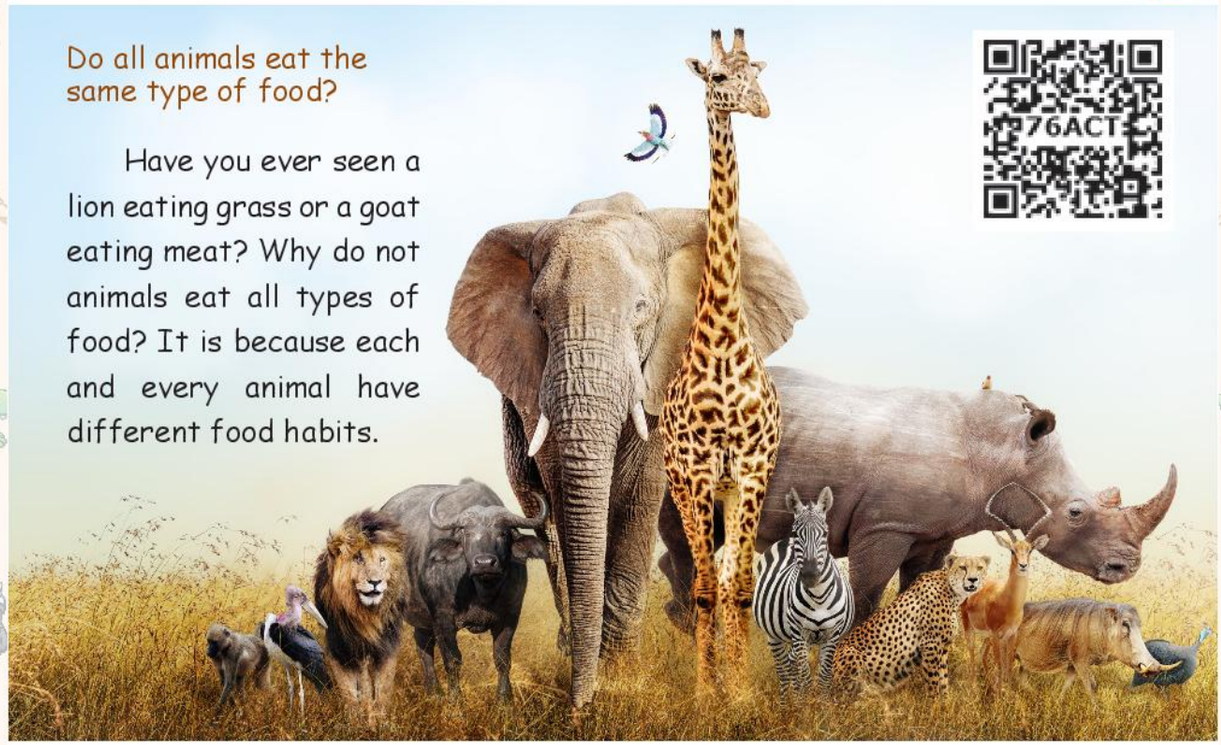
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III. Classification of animals based on their eating habits

Do all animals eat the same type of food?

Have you ever seen a lion eating grass or a goat eating meat? Why do not animals eat all types of food? It is because each and every animal have different food habits.



Herbivores

Animals that eat only plants are called herbivorous animals or **herbivores** (Plant eaters). E.g., Deer, Giraffe, Cow, Goat and Elephant. They have sharp, straight edged, **flat front teeth called incisors** to bite the grass and leaves.





Let us think

Elephant is a herbivore. But its front teeth are not flat. where they? How can we call them?



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Carnivores

Flesh eating animals are called carnivorous animals or carnivores. E.g., Hyena, Tiger, Lion, Cheetah and Seal. They have sharp, pointed teeth called canines. Canines are used to tear the flesh of animals.





Omnivores

Some animals eat both plants and the flesh of other animals. These animals are called omnivorous animals or omnivores. E.g., Bear, Man, Crow, Hen and Fox. These animals have a combination of tearing, biting and grinding teeth.





Forest – A natural home for wildlife



Think and Answer

You tell your friend that you are an omnivore.

But he tells that he is an herbivore. It is right or wrong? How?

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More to know

- Animals that hunt other animals are called **predators**
- Animals that are hunted are called **prey**.

Let Us Connect

Observe the pictures and draw a line to connect them to the appropriate jars.






















Do you know?

- An adult elephant can eat upto 136 kg of food in a day.
- Some of us have colourful fishes in our homes as pets. We keep them in small water tank known as aquariums.



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Let Us Find

Circle the foods that the animal will eat.
You can choose more than one, if applicable.











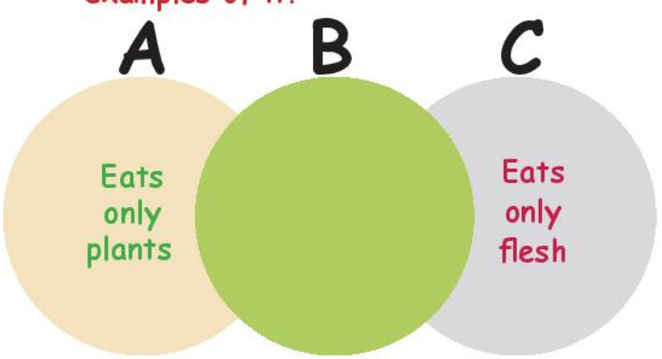






Let Us Find

From the given diagram, identify which animal group is represented by 'B' and write three examples of it.



Examples : ……, ……, ……

Let Us Play

Play in pairs. Think of a wild animal. Give three hints to your friend about the animal and let him or her guess its name. Take turns.

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IV. Mouth parts of animals

(Conversation between teacher and students)

Teacher : Do you know the parts in your mouth?

Pandiyan : Lips, teeth, tongue.

Teacher : Good. Do you know the use of teeth?

Vennila : They cut and chew the foodstuff.

Teacher : Fine. Are all the teeth have same size and shape?

Vasu : No, Madam.

Teacher : Yes. The teeth have different shape and size based on their functions. Today, we will learn more about these mouth parts. Mouth parts are different parts of the mouth that are adapted based on the nature of food that the animal eats.



The elephant uses its trunk for picking up food and sucking water.



Dogs and cats lick liquids with the help of their tongue.



The butterfly has a tube like structure (proboscis) to suck nectar from flowers.



The mosquito has a needle like structure to suck blood.



The lizards and frogs have a sticky tongue to catch insects.

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Observe and Learn

Look at flowering plants near your school or home. Watch the butterflies which visit those plants. Do they come at all times in a day? Do they sit still or fly from flower to flower?



Think and Answer

Have you ever wondered why birds have beaks of different shapes and sizes?



Beaks of Birds



Eagle

Eagle has strong, sharp, curved beak to catch prey and tear its flesh.



Kingfisher

Fish-eating birds have spear-like beaks designed for stabbing fish.



Parrot

The hooked, sharp beak of parrot helps to collect and eat the grains.



Woodpecker

Strong chisel beak of woodpecker is used to make hole in the trees and catch small insects.



Sparrow

Sparrow has short, conical beak which helps to crack open the shells and extract the inner nut or seed.



Duck

Duck has flat beak that helps to grip plant and insect from water.

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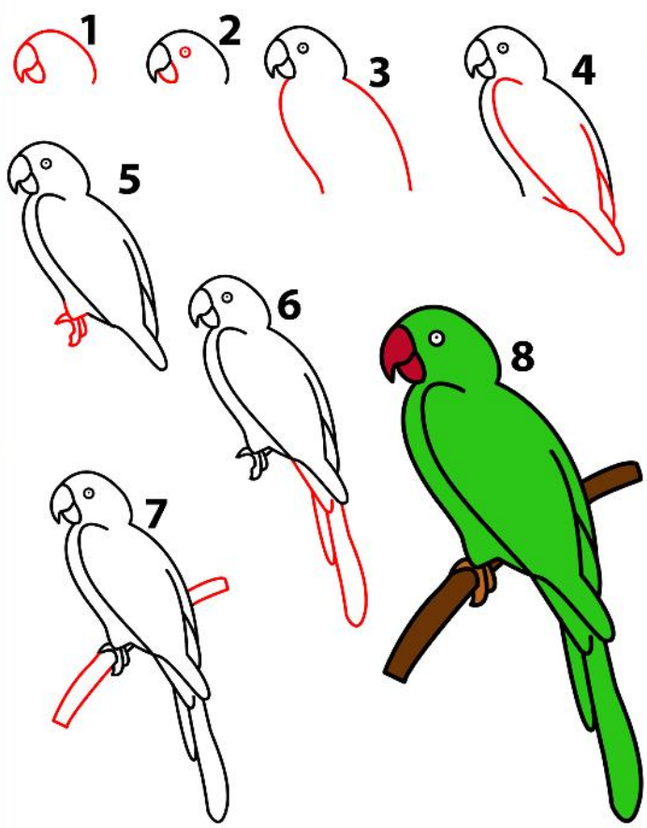
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Let Us Draw

1. Draw the beaks of birds which perform the following functions.

Eat Grains	Eats Flesh

2. Draw and colour a parrot.

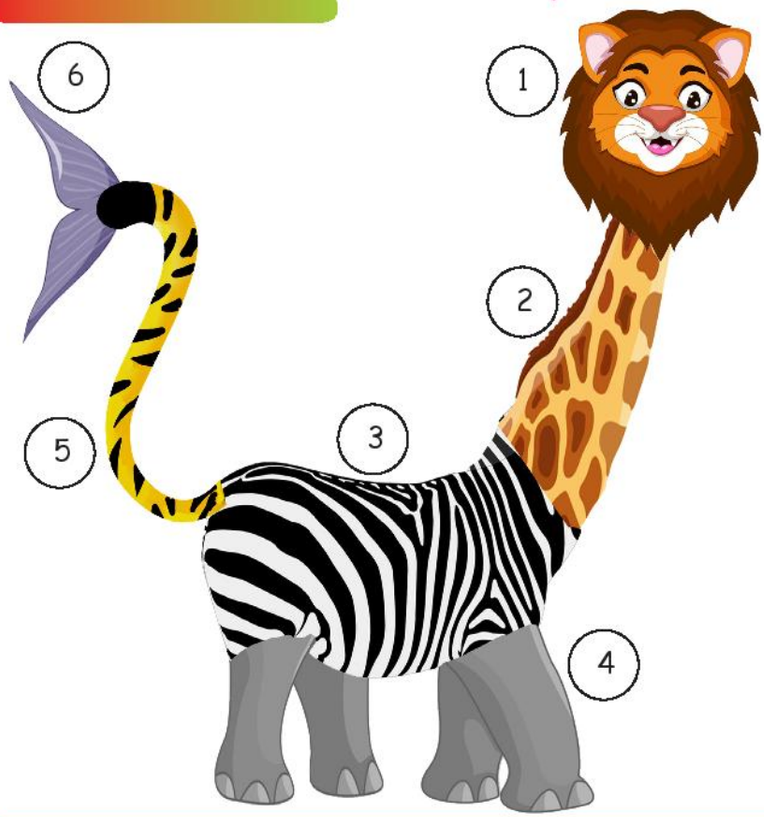


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Let Us Find

Observe the picture and name the animals in it.



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

V. Food Chain

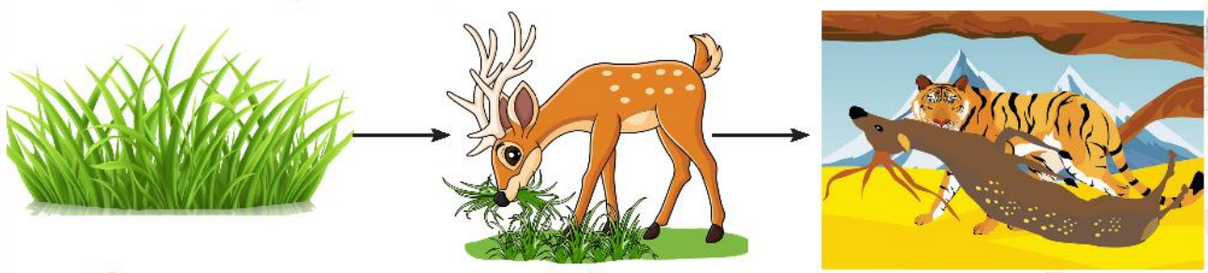
When you look around you can see the following.

The grass is food for deer and deer is food for tiger.

Plants are food for grasshoppers and grasshoppers are food for bird.

From these examples, we observe that plants are food for many animals, which in turn become food for other animals.

Let us look at the picture below:



Grass → Deer → Tiger

This is a food chain. It gives us information on how living things are related with one another by the food they eat. Here the grass is eaten by deer. The deer is eaten by the tiger.

A food chain usually starts with plants and ends with carnivores or omnivores.

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Other examples for food chain.

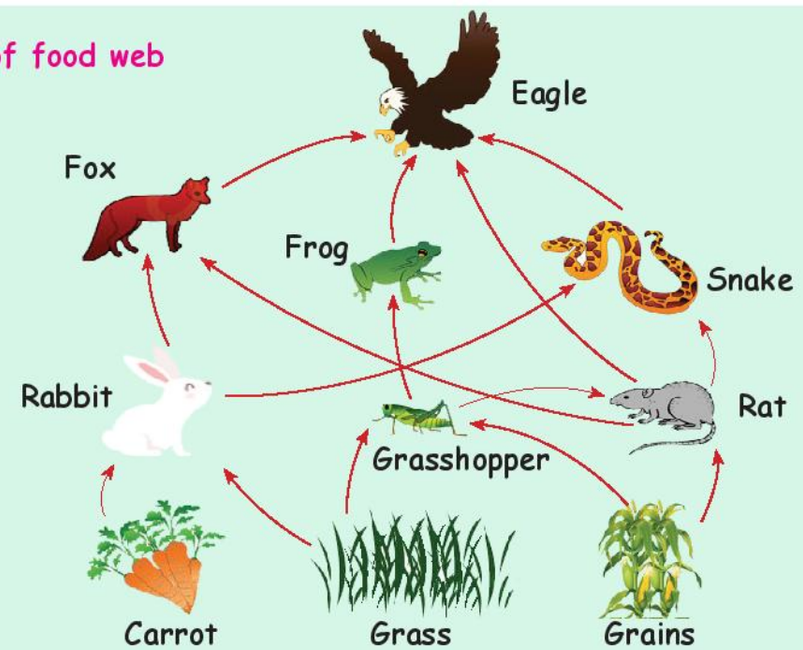
1. Leaves → Caterpillar → Hen → Hawk
2. Grass → Grasshopper → Rat → Owl

Food Web

Every organism can feed on different kinds of food. So a single organism will be a part of many food chains. These food chains are interconnected to form a web.

Hence, a Food web is an interconnection of multiple food chains. Transfer of energy between organisms of different energy sources occurs through food web.

Example of food web



Try to Answer

1. Select the food chain that can exist in nature.

A. Grass → Wheat → Grasshopper → Frog → Snake

B. Grass → Rabbit → Fox → Lion

C. Wheat → Grasshopper → Snake → Frog

2. Form any two food chains using the following.

(Grass, Tiger, Deer, Dolphin, Fish, Insect, Snail, Plant, Kingfisher)

Food chain 1:

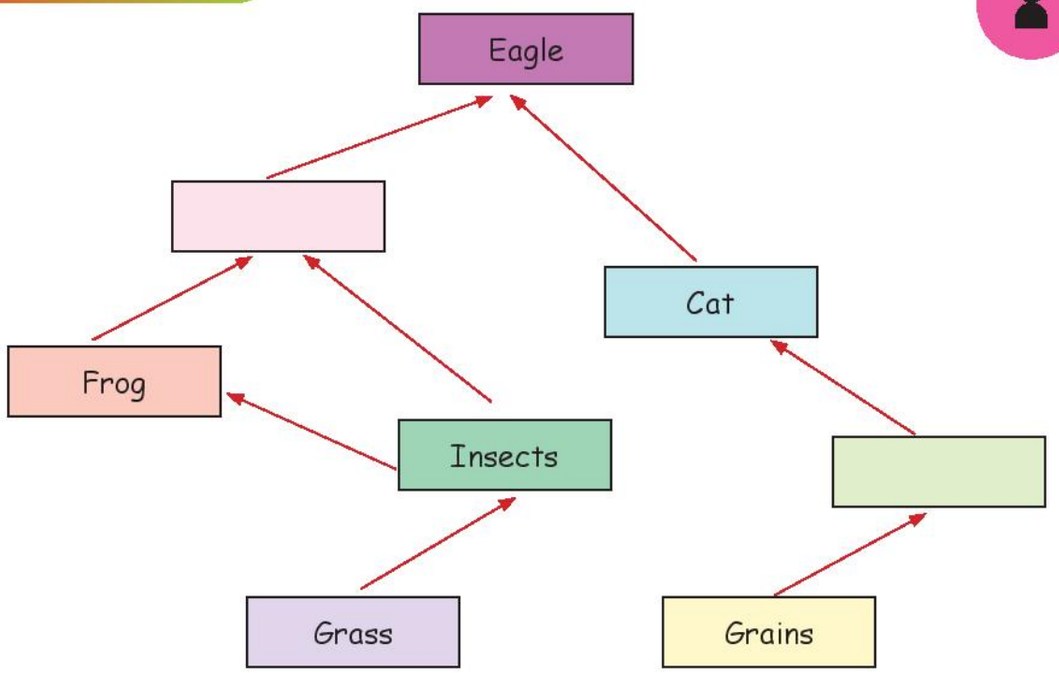
Food chain 2:

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Let Us Complete

Complete the food web.



EVALUATION

I. Choose and write the correct answer.

1. Mosquito sucks its food. Which of the animals given below suck their food?
   a) Cockroach b) Parrot c) Butterfly
2. Bear sometimes eats pumpkin and sometimes eats fish. So, it is an _____.
   a) Carnivore b) Omnivore c) Herbivore
3. A bird that has beak which helps it to crack open shells and eat the seed inside is
   a) Sparrow b) Owl c) Kingfisher
4. Flesh eating animals have well developed _____.
   a) Molars b) Tusks c) Canines
5. Elephant is a _____.
   a) Herbivore b) Carnivore c) Omnivore
6. Choose the carnivore.
   a) Deer b) Lion c) Giraffe
7. In a food chain, a _____can be placed immediately before a snake.
   a) Eagle b) Frog c) Grass

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8. Select the animal that has similar eating habit like a bear.

a) Camel b) Deer c) Hen

9. Find the odd one based on the habitat.

a) Deer b) Fish c) Fox

10. Which of the following has different eating habits compared to the others?

a) Elephant b) Cow c) Dog

II. Fill in the blanks.

1. A small habitat is _____ (forest / leaf).
2. Butterflies suck _____ (honey / water) from flowers.
3. Chisel beak is present in _____ (sparrow / woodpecker).
4. The parrot eats _____ (rats / nuts).
5. A food chain always begins with _____ (plants / animals).

III. Answer the following questions.

1. Land and water are common habitats. What is a habitat?
2. Give two examples for each.

   a. Terrestrial Animal : _____, _____.

   b. Aquatic Animal : _____, _____.
3. Why animals move from place to place?
4. Honey is the food of butterfly. Then, what is the food of earthworm?
5. Differentiate a herbivore from a carnivore.
6. Is human an omnivore or a carnivore?
7. Give an example of a food chain.
8. Choose the correct food chain from the following.

   a. Leaves → Bird → Insect

   b. Insect → Leaves → Bird

   c. Leaves → Insect → Bird

IV. Project

Collect and paste the pictures of plant eating animals and flesh eating animals.

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Unit 3

Air



Learning Objectives

At the end of the lesson the students will be able to

- understand the properties of air through experiments
- understand the process of breathing in human beings
- identify the types of wind with respect to speed

DTY2X

Warm - up

Try to Answer Observe the pictures and answer the given question.



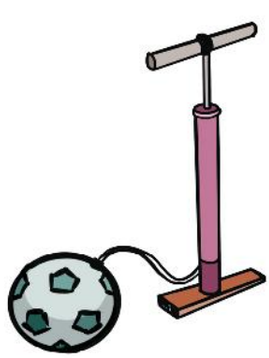
Blowing balloon



Flying kite



Making bubbles



Filling the ball

What is necessary for these activities? _____.

3rd Science Unit 3_Air.indd 92 9/2/2022 3:36:29 PM

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I. Properties of Air

Air is a natural resource. We cannot live without it. It is present around us. It has no definite shape and colour. Air has weight and it occupies space. We cannot see air but it can be felt. Air can flow everywhere.

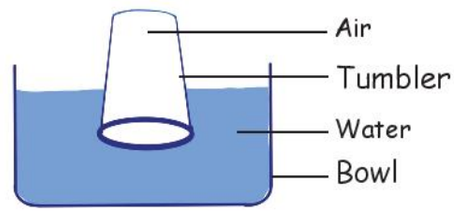
Air occupies space

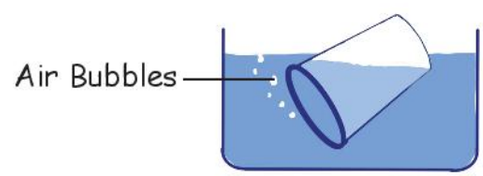
Note for teacher: Demonstrate all the given activities in the classroom.

Materials required: A tumbler, a bowl and water

Procedure:

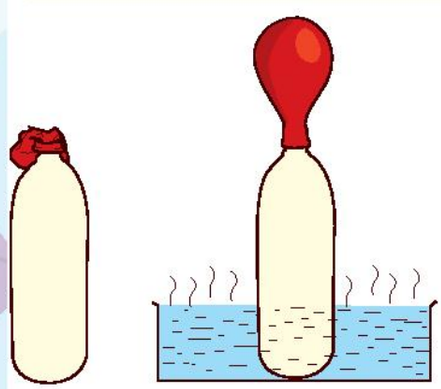
Place a tumbler on the surface of the water kept in a bowl (see picture). Push the tumbler straight into the water. Now, tilt it slightly and push it into the water. Do you observe any difference? Yes air bubbles come out of water.





Through this experiment we can understand that air occupies _____.

Hot air rises up



Tie a balloon to the mouth of a bottle as shown in the picture. Let the mouth of the bottle be narrow. Keep the bottle in a vessel containing hot water. Observe it for some time. The balloon expands. Why?

Due to the heat of the water in the vessel, air inside the bottle becomes hot. Hot air fills the balloon. Therefore the balloon expands.

What do you understand from this experiment?
Hot air rises _____.

Air has weight

Procedure:

Take two balloons. Fill air in one balloon and keep the other balloon as it is. Make a measuring tool using a stick and tie the balloons on both the ends as shown in the pictures. Which balloon comes down and why? Do and find.



This experiment proves that air has _____.

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Try to Answer

a. **Write true or false for the following statements.**

1. Air occupies space but has no weight. ……
2. Air is colourless. ……
3. Air has definite shape. ……

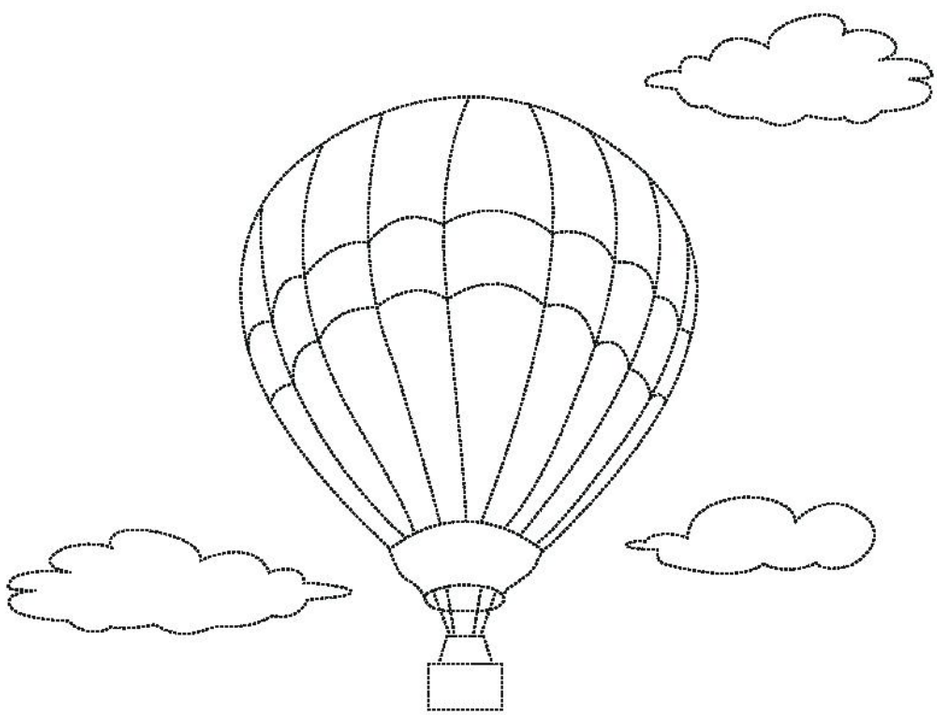
b. **If we fill air in the -------- , it will change its shape.**

1. jar 2. jug 3. ball

c. **Which of the following is required for good health?**

1. Dust 2. Clean air 3. Smoke

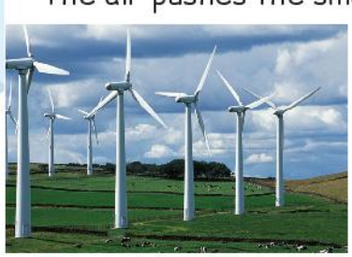
d. **Colour the hot air balloon.**



II. Air moves and pushes things

Light an incense stick in the corner of the classroom and observe. The smoke of the incense stick moves everywhere. The air pushes the smoke.





See the clouds in the sky that moves everywhere. Clouds move because of the movement of air.

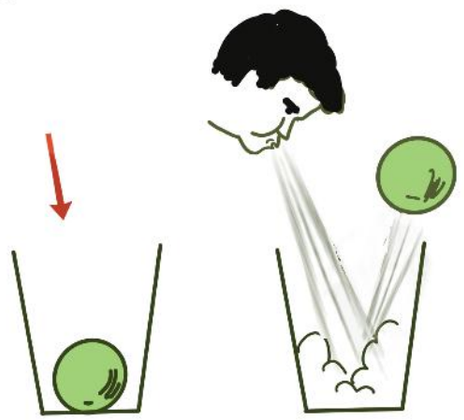
Electricity is generated from wind with the help of the windmills.

3rd Science Unit 3_Air.indd 94 9/2/2022 3:36:32 PM

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Let Us Do

Can you remove a small plastic ball from a glass vessel without physically touching it? Yes, you can. If you blow towards one wall of the glass very hard and the ball will be ejected out of the glass.



Let Us Do

Take a plastic bottle and fit a soggy newspaper pellet tightly in its mouth. On pressing the bottle, the pellet will come out with a loud POP sound.



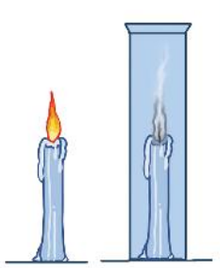
Let Us Try

Make a paper plane with waste paper and fly it in the air.

These activities conclude that air _____ the things.

Air is required for burning

Light a candle and place it on a table. Now cover the lightning candle with a glass jar. Observe what happens?



_____ is required for burning things.

Air exerts pressure



When you drink fresh juice, you suck it through straw. We do this with the help of air.

How does a straw work?

Mix a few drops of ink in half a glass of water. Place a transparent straw inside the glass containing coloured water. Then place your finger on the top of the straw and pull the straw out of the liquid. What happens?

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Then remove your finger from the straw. What happens? While your finger covers top of the straw, the liquid remains in the straw. When you remove the finger, the water flows out.

When you keep your finger on the straw, you are lessening the pressure of air over the straw. The greater pressure of air under the straw can hold the liquid inside the straw.



Let Us Do

Air Jack

Materials required: Empty plastic milk cover, a piece of thick string and an old pen body or pipe.

Procedure: Tie an old pen body or a pipe to the mouth of the milk cover with a string. Place 3 or 4 thin note books up on the plastic milk cover and slowly blow air into it with your mouth. As the cover gets inflated the books get raised. How does that work? The pressure that you exert with your mouth is limited. But the large area of the milk cover magnifies this pressure and lifts the books.







The above activity shows that _____.

1. Air rises up on getting warm
2. Air is needed for burning
3. Air has pressure

III. Breathing (Inhalation and Exhalation)

Let Us Do and Discuss

- Keep your finger near your nose and breathe. Do you feel air on your fingers?
- Try to count how many times you breathe in a minute.
- Now jump 6-7 times. Is your breathing rate the same or is it faster?
- Run 100 meters and stop. Observe your breathing.

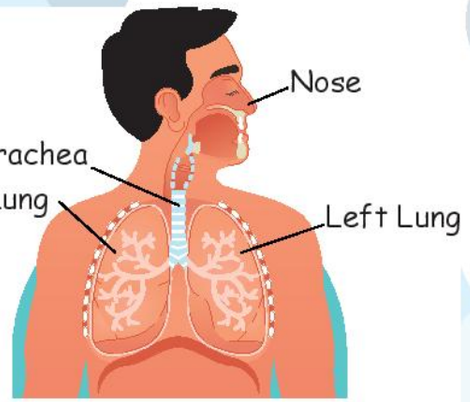
All living things need air for their survival. Plants breathe through leaves and fish breathe through gills. Humans breathe in and breathe out through lungs.

3rd Science Unit 3_Air.indd 96 9/2/2022 3:36:40 PM

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Inhalation is the process of taking the air inside and exhalation is the process of releasing the air outside. This **cyclical process of inhalation and exhalation is called breathing.**

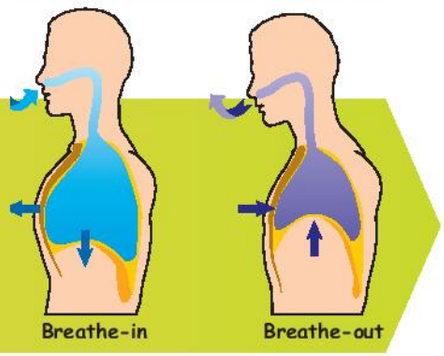
We take oxygen and release carbon dioxide gas while breathing.



Think zone: Why the doctor checks your pulse when you are sick and ask you to breathe in and breathe out?

Do you know?

When we breathe-in our chest raises up and when we breathe-out it lowers down.



Let Us Do

Tick (✓) the one which breathes and cross (X) the one that does not breathe.












Let Us Write

Choose and write the correct answer for the following actions.

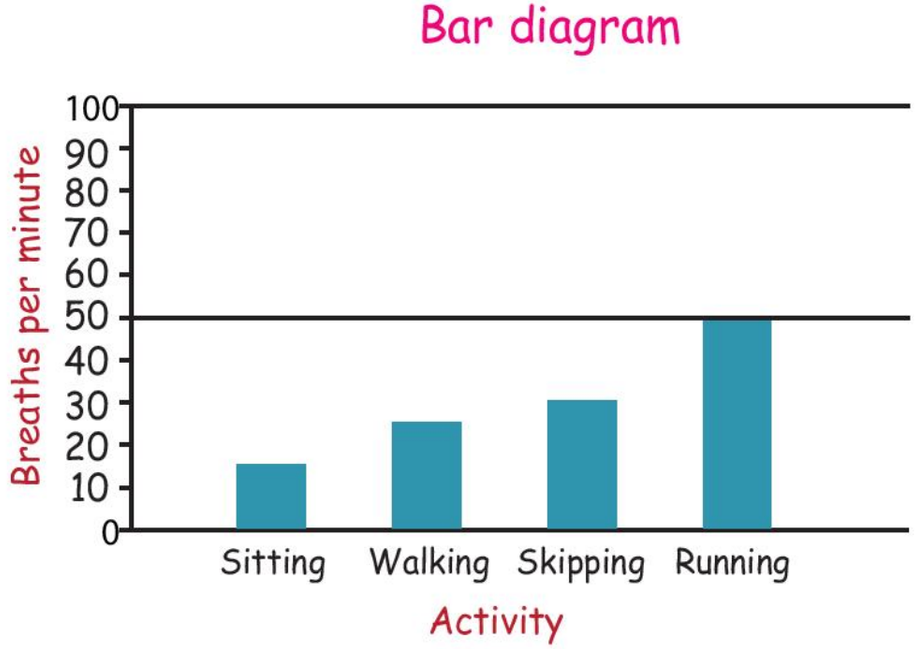
S.No	Actions	Inhalation / Exhalation
1	Air moves out of the lungs	
2	Air goes into the lungs	
3	Chest raises up	
4	Chest lowers down	

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Try to Answer

The effect of exercise on breathing

Mathi and Mozhi practised various exercises like walking, skipping and running. They counted the number of times they breathed in one minute after each exercise and recorded their results in the bar diagram:



Look at the bar diagram.

a. Which activity raised the breathing rate the most? _____

b. Which activity do you think exercises the heart muscle the least? _____

c. Write 'T' if True and 'F' if False.

1. They breathed more number of times when they were walking. ( )
2. They breathed less number of times when they were sitting. ( )
3. They took 50 breaths per minute when they were running. ( )
4. The more vigorous (active) the exercise, the greater the number of breaths. ( )

IV. Moving Air

Let us Do: Take some sand in your hand and release the sand. It falls in the direction of the wind.

Moving air is called wind. It moves across the surface of the Earth. **Based on the speed of air, wind** can be classified as **breeze, storm and gale.**

Do you know? Speed of the wind is measured using an instrument called 'Anemometer'.

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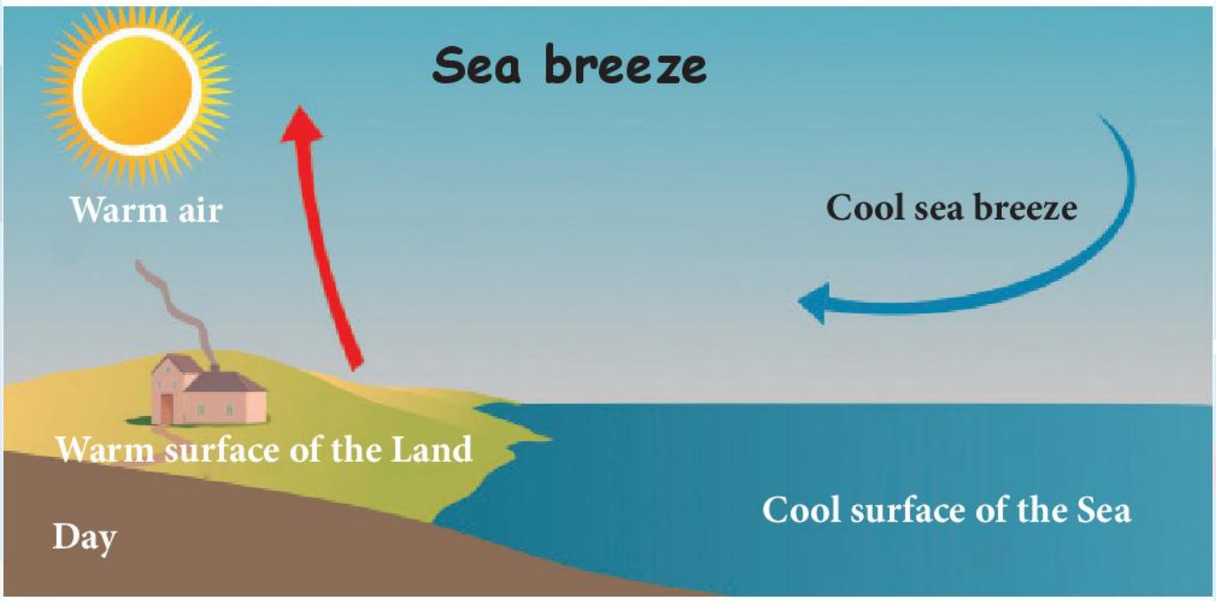
Breeze



A gentle wind is called breeze. Sea breeze and land breeze are the two types of breeze.

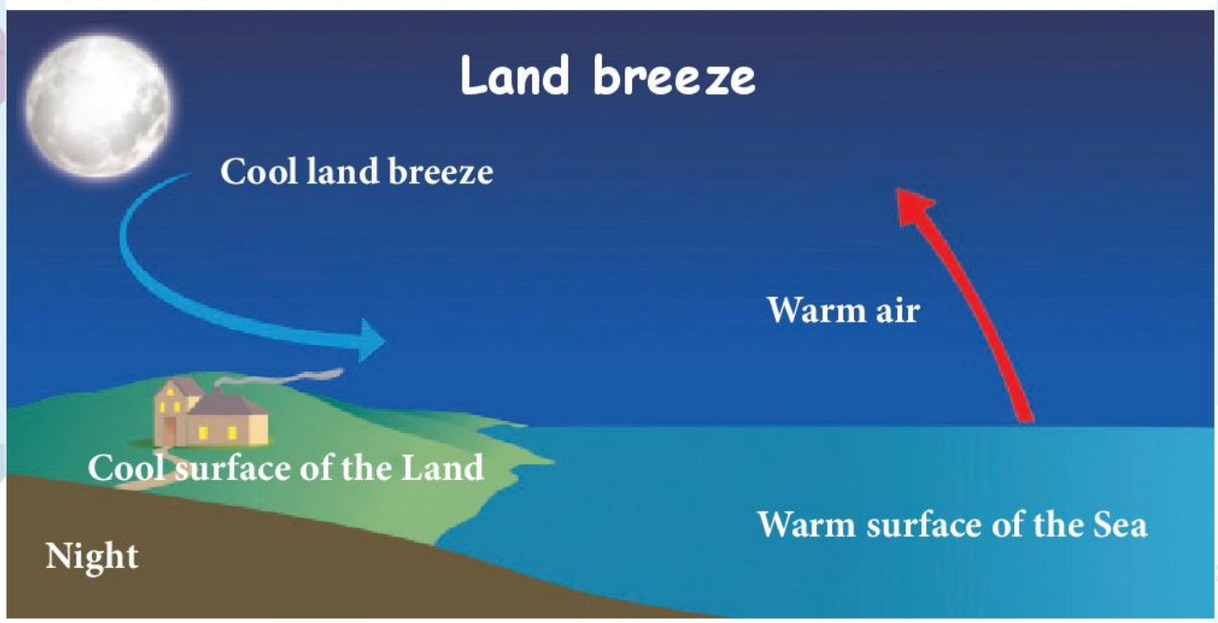
Sea breeze

The breeze that blows from the sea towards the land during day time is known as sea breeze. As the warm air from the land rises up and the cold air from the sea occupies the space over the land.



Land breeze

The breeze that blows from the land towards the sea during night time is known as land breeze. The warm air from the sea rises up, and the cold air from the land moves towards the sea.



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Storm

Strong wind is called storm. Sometimes storm can uproot trees and can destroy the crops.





Gale

A very strong wind is called gale. Gale is stronger than storm. It damages trees and buildings a lot.



Note for teacher:

- Show the pictures of some natural disasters and discuss about them.
- Discuss about the consequences of leaving deep bore well open.

Let Us Connect

Match the following.

a. Breeze	-	Strong wind
b. Storm	-	Very strong wind
c. Gale	-	Gentle wind

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Let Us Draw

Draw the movement of air for land breeze and sea breeze.





_____ breeze





_____ breeze

Try to Answer

Fill in the blanks.

1. Gentle air is called _____.
2. We get electricity from wind using _____.
3. The air that flows from the land towards the sea is _____.
4. Sea breeze is the air moving from _____ towards _____.

Let Us Do

Take two cups. Fill one with sand and the other with water. Leave them in the sunlight for about an hour. Keep one hand in the cup with sand and other hand in the cup with water.

Which one is hotter? Sand / Water

Now keep both the cups in the shade for a while. Now put your fingers in both the cups once again.

Which cup is cooled faster? Sand / Water



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Try to Answer What will you do during disaster?

(I will / I will not)

a. _____ watch TV when it rains heavily.

b. _____ follow the warnings.

c. _____ stand under a tree when heavy wind blows.

EVALUATION

I. Fill in the blanks using the given words.

(air, weight, raises, lungs, inhale)

1. Air has _____ .
2. Things need _____ for burning.
3. The process by which we breathe in air is known as _____.
4. The organ that helps us to breathe is _____.
5. When we breathe in air, the chest _____ up.

II. Write 'T' if True and 'F' if False.

1. Air is nowhere.
2. Air fills the empty space.
3. Clouds move because of the movement of air.
4. A very strong wind is called gale.
5. We release oxygen during breathing.

III. Circle the odd one and answer the question.

1. Balloon, Cycle tube, Football, Cricket ball
   Why is it different from the rest?
2. Kite, Balloon, Stone, Feather,
   Why _____ differs from the rest?

IV. Answer the following.

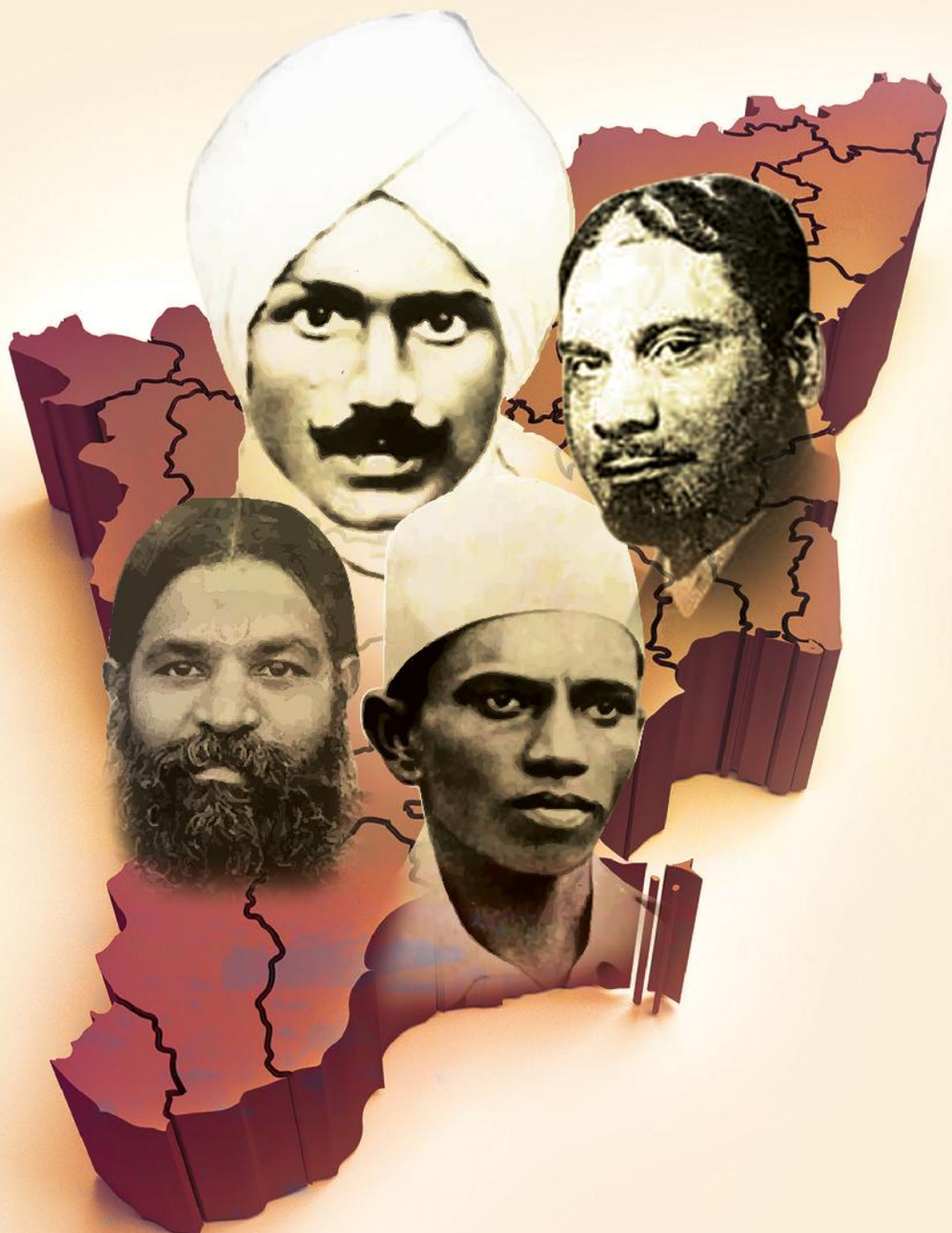
1. What are the properties of air?
2. Write the use of windmill.
3. What is breathing?
4. Write the processes involved in breathing.
5. Write the types of wind based on the speed of air.
6. Differentiate between land breeze and sea breeze.

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SOCIAL SCIENCE 3

TERM-III



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E-Book

HTP4A

Evaluation



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UNIT 1

FREEDOM FIGHTERS OF TAMIL NADU





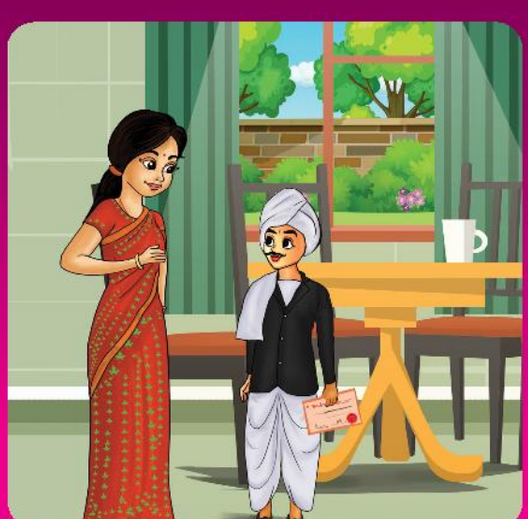
Learning Objectives

Childern will be able to:

- know the freedom fighters of Tamil Nadu.
- understand their contribution in freedom movement.



K1X43



A little girl dressed up as Bharathiyar comes to her mother with a certificate in her hand.

3rd Std Social Science Term III EM Unit 1.indd 105 12-10-2022 18:55:45

Meena: Mom, I am so happy. I won the first prize in the fancy dress competition today.





Mother: Very good. I am proud of you, Meena.

Meena: Thank you!





Mother: How was the Independence Day celebrated in your school?

LET US KNOW

Independence Day is celebrated on **15th August**, every year in India. It is to commemorate the nation's independence from the British rule on 15th August 1947.

3rd Std Social Science Term III EM Unit 1.indd 106 12-10-2022 18:55:46

Meena: It went very well. My teachers appreciated me for my speech as Bharathiyar.





Mother: Well done. I missed your performance as Bharathiyar.

Meena: Don't worry. I will enact again.





Mother: Sure.

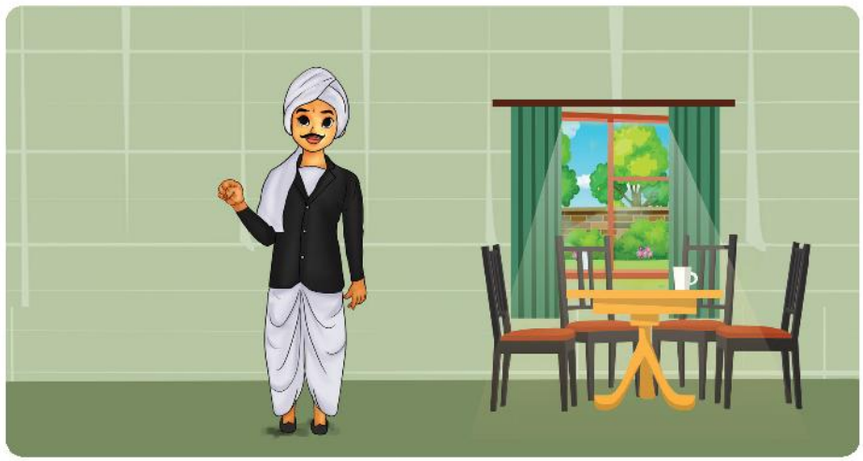
Think



When do we celebrate our **Republic Day?**

3rd Std Social Science Term III EM Unit 1.indd 107 12-10-2022 18:55:46

Meena enacts



Meena: I am Subramaniya Bharathi. I am a poet and freedom fighter of Tamil Nadu. I was born in a village called Ettayapuram in Tirunelveli District. I started writing poems at the age of seven. My poems are patriotic and it is all about gender equality and women empowerment. I worked as a teacher. Then I became the Assistant editor of the Swadesamitran newspaper in 1904. I also met Mahatma Gandhi in 1919. I worked with many Tamil leaders like V.O. Chidambaram and Subramanya Siva. My poems Vande Matharam, Acham Illai, Enthaiyum Thaayum and Jaya Bharatham motivated people to join the freedom struggle movement. Thank you!



3rd Std Social Science Term III EM Unit 1.indd 108 12-10-2022 18:55:47



Mother: Excellent, Meena. You spoke very well. Bharathi was indeed a great freedom fighter and one can't forget his contribution for the freedom struggle.

Meena: True. I also learnt about other freedom fighters of Tamil Nadu today.





Mother: Oh, is it? Tell me what you learnt.



The title Bharati, a name of the Goddess of Knowledge, was conferred upon him at the age of eleven by the court of Ettayapuram for his ability to compose poems on any subject, at any moment.

Subramaniya Bharathi

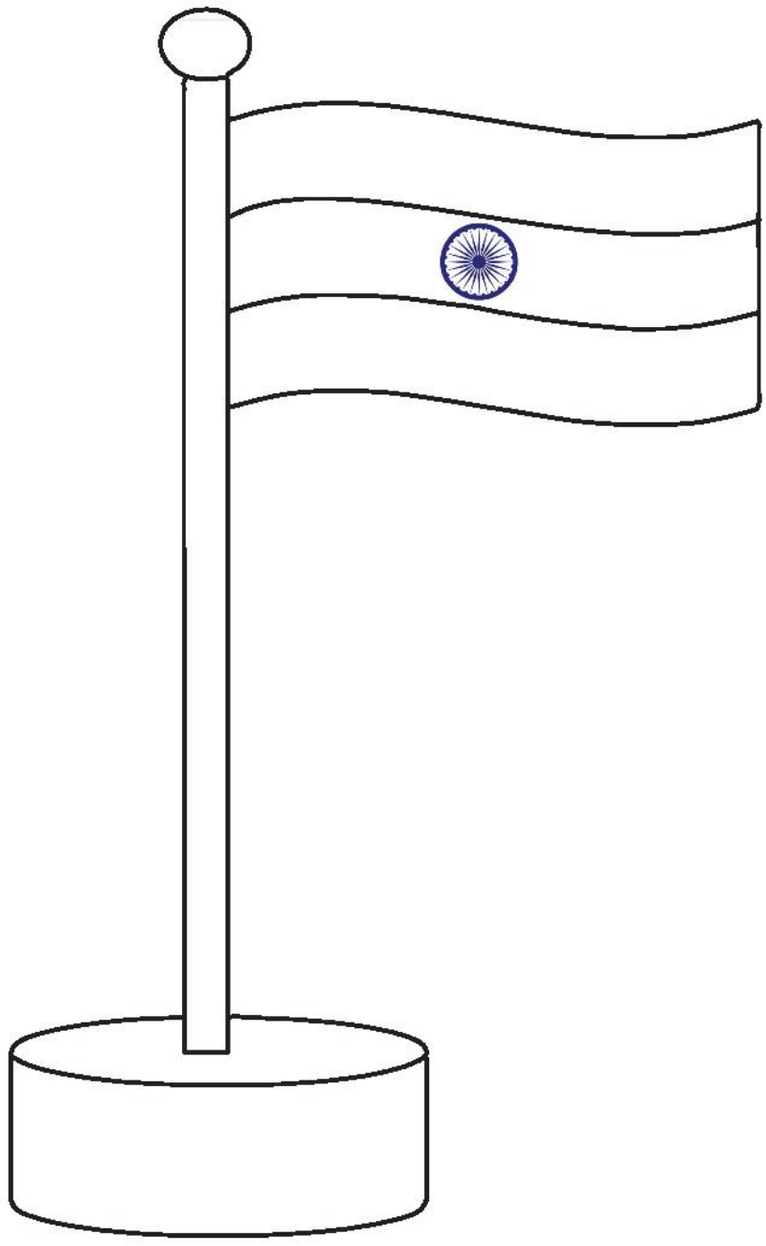


3rd Std Social Science Term III EM Unit 1.indd 109 12-10-2022 18:55:48

ACTIVITY

Let us colour.

Colour our National Flag.



3rd Std Social Science Term III EM Unit 1.indd 110 12-10-2022 18:55:48

Meena: One of my friends dressed up as **V. O. Chidambaram** .





V. O. Chidambaram



Mother: V. O. Chidambaram was also called **Kappalottiya Tamilan**.

Meena: Yes. He was born in **Thoothukudi**. He was a lawyer and was also a good orator. He took part in the Indian Independence movement.





Mother: Meena, did you know that V.O. Chidambaram started the first **Indian shipping company.** It was called Swadeshi Shipping Company.

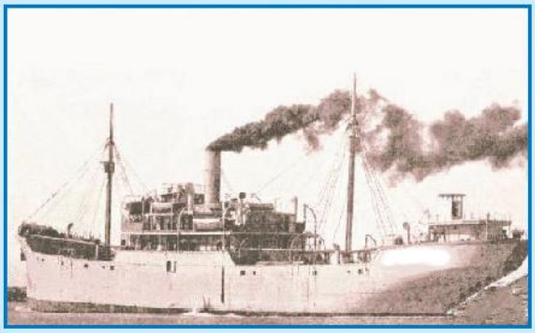
Meena: Yes, mom. **V.O. Chidambaram** gained popularity. Many people started to follow him. Hence, the British sent **V.O. Chidambaram** to jail.

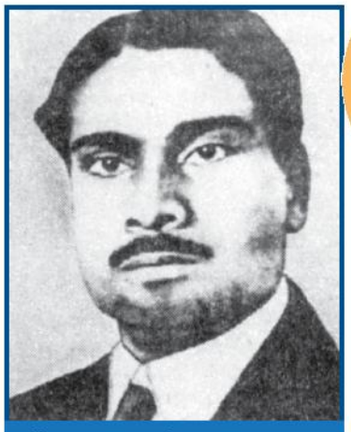


3rd Std Social Science Term III EM Unit 1.indd 111 12-10-2022 18:55:49

LET US KNOW

Vallinayagan Ulaganathan Chidambaram known as **V.O. Chidambaram** started the **Swadeshi Steam Shipping** between Thoothukudi and Colombo against British ships.





Chempakaraman



Mother: You are right. Though he was in the jail, he continued to fight for India's Independence. His patriotism inspires many people even today.

Meena: Yes, mom. Then, I learnt about **Chempakaraman.**



ICDB9

3rd Std Social Science Term III EM Unit 1.indd 112 12-10-2022 18:55:50



Mother: Yes. During his school days, he met a British biologist, Sir Walter Strickland, who took him to **Austria**. Chempakaraman completed his schooling in Austria.

Meena: Though he grew up in a foreign land, he was still very patriotic.





Mother: That's right. Champakaraman established an organization called **International Pro India Committee** at Zurich before the outbreak of the World War I. During the war, Champakaraman intensified his revolutionary ideologies. He also joined the **Indian Independence Committee** in Berlin.

Meena: My teacher told that he coined the slogan **'Jai Hind'** which is used till today.





Mother: Yes.

3rd Std Social Science Term III EM Unit 1.indd 113 12-10-2022 18:55:50

ACTIVITY
Let us write

Name the freedom fighters of Tamil Nadu.

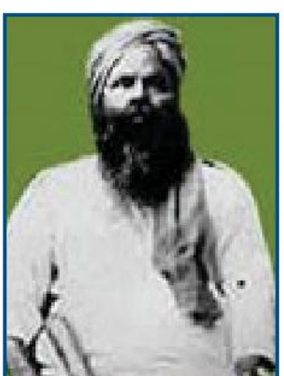


QJGL5



Meena: Then, I learnt about Subramania Siva.





Subramania Siva



Mother: He was a freedom fighter and a creative writer.

Meena: Yes, mom. He was born in Dindigul and was very passionate about Tamil.



3rd Std Social Science Term III EM Unit 1.indd 114 12-10-2022 18:55:51



Mother: **Subramania Siva** started a monthly newspaper called **Gnanabanu.** He wrote many books namely Ramanuja Vijayam, Sankara Vijayam and so on.

Meena: He inspired many young people to join the freedom movement. This angered the British and they sent him to jail.





Mother: Even though he was in the jail, he continued his work for the freedom movement.

Meena: Oh! Really?





Subramania Siva closely worked with **V.O. Chidambaram** and **Subramanya Bharathi** in freedom movement. The collector office of Dindugal district is named as **Thiagi Subramania Siva Maaligai**.

3rd Std Social Science Term III EM Unit 1.indd 115 12-10-2022 18:55:52



Mother: Did you learn about **Tiruppur Kumaran**?



Tiruppur Kumaran

Meena: Of course. He was born in Tiruppur. During his young age, he actively involved himself in the freedom movement.





Mother: Yes, Meena. He started **Desa Bandhu Youth Association.** It inspired many young people of Tamil Nadu to take part in the freedom struggle.

Meena: During the protest against the British, he died holding the **National flag of India**. So, he is called **Kodikaththa Kumaran**.





Mother: You are right.

3rd Std Social Science Term III EM Unit 1.indd 116 12-10-2022 18:55:52

Meena: I am very much inspired after knowing all these freedom fighters of Tamil Nadu.





Mother: Yes. Their patriotism towards India and the contribution to Independence can never be forgotten.

Meena: They inspire and motivate us to be better citizens and serve our country.





Mother: You are right.

LET US KNOW

Lakshmi Sahgal was a revolutionary of the Indian independence movement. She was an officer of the **Indian National Army**. She is commonly called **Captain Lakshmi**.



3rd Std Social Science Term III EM Unit 1.indd 117 12-10-2022 18:55:53



Glossary

Commemorate	:	Celebrate
Contribution	:	Join or take part
Patriotism	:	Love and respect towards one's country



Recap

- Many freedom fighters from Tamil Nadu made their contributions to India's freedom.
- Subramaniya Bharathi was a poet and a freedom fighter of Tamil Nadu.
- V. O. Chidambaram is also called Kappalottiya Tamilan.
- Chempakaraman coined the slogan 'Jai Hind'.
- Tiruppur Kumaran is also called Kodikaththa Kumaran.

3rd Std Social Science Term III EM Unit 1.indd 118 12-10-2022 18:55:54

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EVALUATION



I. Choose the correct answer.

1. Where was Bharathiyar born?

   a) Ettayapuram b) Madurai c) Dindugal

2. _____ was not composed by Bharathiyar.

   a) Vande Matharam b) Acham Illai c) Kaththiyindri

3. _____ is known as 'Kappalottaiya Tamilan'.

   a) Subramania Siva b) Bharatiyar c) V. O. Chidambaran

4. Who coined the slogan 'Jai Hind'?

   a) Bharatiyar b) Chempakaraman c) Kumaran

5. Who started a monthly newspaper 'Gnanabhanu'?

   a) Subramania Siva b) Bharatiyar c) V.O .Chidambaram

II. Match the following.

1	Desa Bandhu Youth Association	Bharatiyar
2	Dindugal	Tiruppur Kumaran
3	International Pro India Committee	Subramania Siva
4	Swadesamitran	V.O Chidambaran
5	Lawyer	Chempakaraman

3rd Std Social Science Term III EM Unit 1.indd 119 12-10-2022 18:55:59

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III. Answer the following.

1. Name the freedom fighters of Tamil Nadu.
2. Name some poems written by Bharatiyar.
3. Write about the Swadeshi Steam Shipping Company.
4. What is the contribution of Chempakaraman in freedom struggle?
5. Write a short note on Tiruppur Kumaran.











FUN WITH ACTIVITY

PROJECT:

Write few sentences about the Independence day that took place in your school.

3rd Std Social Science Term III EM Unit 1.indd 120 12-10-2022 18:56:02

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UNIT 2 MINERAL RESOURCES





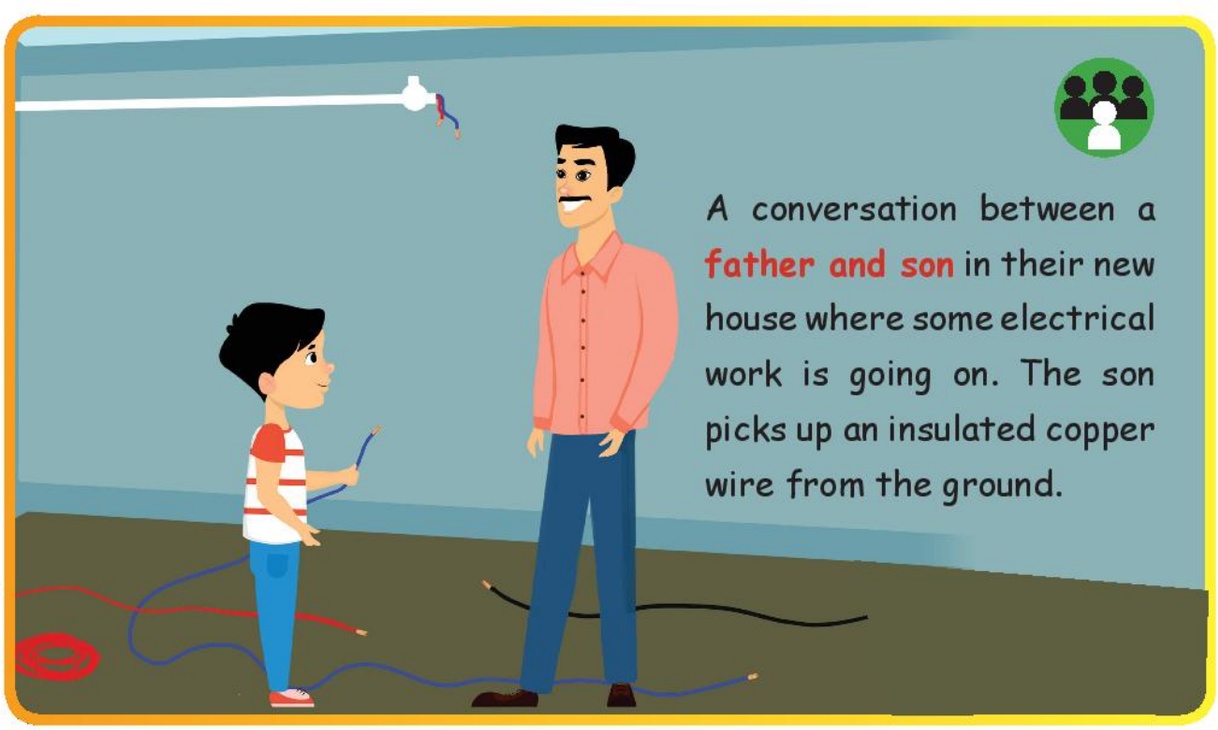
Learning Objectives

Childern will be able to:

- list the minerals found in Tamil Nadu.
- describe the uses of the minerals.



L79MN



A conversation between a **father and son** in their new house where some electrical work is going on. The son picks up an insulated copper wire from the ground.

3rd Std Social Science Term III EM Unit 2.indd 121 12-10-2022 19:02:12

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Son: What is this daddy ?

Father: That is a wire. We are using it to give electrical connection in our house.





Son: This is blue thick wire and there are many thin metal wires inside this.



Father: The thin metal wires are made up of copper.





Son: Copper?



3rd Std Social Science Term III EM Unit 2.indd 122 12-10-2022 19:02:13

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Father: **Copper** is one of the most used mineral in today's world.





Son: I have read about minerals in school. They are very useful and are found naturally on the **Earth**.

Father: You are right. **Copper** is very good conductor of electricity.





Son: Is it?



Father: Yes, **Copper** is used in all electrical appliances including computers, televisions, mobile phones and other electronic devices.



3rd Std Social Science Term III EM Unit 2.indd 123 12-10-2022 19:02:15

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LET US KNOW

Natural resources are important to us because they satisfy the daily needs of man such as food, clothing and shelter.

8KEJY

ACTIVITY
Let us write

Fill in the blanks.
(Gold, Iron, Copper)



_____ rod



_____ bowl



_____ bangles

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Son: Wow. I did not know that. Tell me about other useful minerals.

Father: Another widely used mineral is Iron ore. It is mainly used to produce iron.







Son: What are the uses of Iron?



Iron ores are found at Kanjamalai in Tamil Nadu.

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Father: Iron is used to make vehicles, engines, railway tracks, ships, buildings, furniture, paper clips, tools, bicycles and thousands of other items.





Natural resources that once consumed, cannot be replaced are called non-renewable resources.

Think



Coal, Petroleum and Natural Gas are called Fossil fuels.
Iron, Copper, Bauxite, Gold, Silver and others are called Mineral resources.

LET US KNOW

Non-renewable resources can be divided into three types. They are:

- Metallic resources
- Non - metallic resources
- Fossil fuel resources

E26YU

3rd Std Social Science Term III EM Unit 2.indd 126 12-10-2022 19:02:19

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Son: Interesting. Is **Gold Ore** a mineral?



Father: Yes it is. **Gold** is extracted from **Gold Ore**. It is considered as one of the most precious mineral.





Son: That's why it is used in making jewels.



Father: You are right. **Gold** is also a very good conductor of electricity and it is found in small amounts in electronic devices including mobile phones, televisions and so on.





Son: Oh is it?



Think



Are there any minerals available in your district? What are they?

3rd Std Social Science Term III EM Unit 2.indd 127 12-10-2022 19:02:21

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Father: Another very useful mineral is **Bauxite**.





Son: Bauxite. I have never heard of it.

Father: Bauxite is used to make **Aluminium**. Aluminium is used in electronics, construction, vehicles and even in utensils.





Son: Tell me more about bauxite, Dad.



The **bauxite** deposits are mainly found in the **Shervaroy hills** of Salem district, Tamil Nadu.



3rd Std Social Science Term III EM Unit 2.indd 128 12-10-2022 19:02:22

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Father: **Bauxite** is used in Aircraft making industry, electrical industry and is also used in making machines.







Son: Interesting.



Father: Bauxite is used to make paper, purify water and refine petroleum. It is also used to manufacture rubber and cosmetics.





Son: This is very informative, Dad.

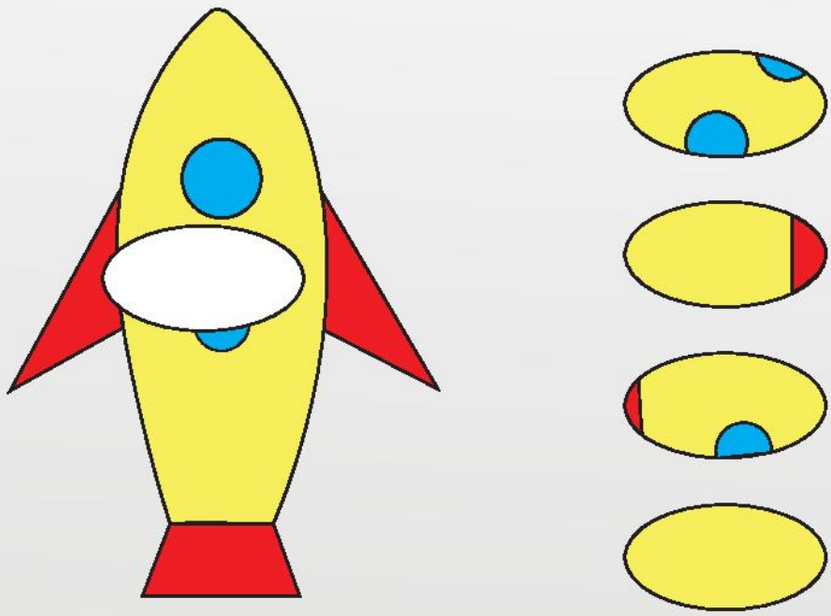
3rd Std Social Science Term III EM Unit 2.indd 129 12-10-2022 19:02:23

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ACTIVITY
Let us do

GWRIQ

Find the missing piece of the Aircraft.



Father: Have you heard about **Zinc**?





Son: No Dad.Tell me about **Zinc**.

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Father: **Zinc** is called the **essential trace element** because very small amount of zinc is necessary for human health. Our body does not store excess zinc, it must be consumed regularly as part of the diet. Common food sources of zinc include **red meat**, **white meat** and **sea food**.







Son: What are the other uses of zinc?



Father: **Zinc oxide** is widely used in the manufacture of many products such as paints, rubbers, cosmetics, medicines, inks, batteries, textiles and electrical equipments.



3rd Std Social Science Term III EM Unit 2.indd 131 12-10-2022 19:02:26

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Son: Oh! Really?



Father: The another most useful mineral is **Potash**.





Son: What are the uses of **Potash**?

Father: 95% of **Potash** is used for making **fertilizers**. If the soil does not have enough potassium, potash **fertilizers** are used to improve the quality of soil. The remaining 5% potash is used in commercial and industrial products such as soap.





Son: Thank you, Dad. This has been very useful. I am going to share this with my friends.

Father: That's a good idea! Son.



3rd Std Social Science Term III EM Unit 2.indd 132 12-10-2022 19:02:27

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Glossary

Conductor	:	A substance that quickly conducts electricity, heat and so on
Precious	:	Valuable
Manufacture	:	Make something on a large scale



Recap

- Minerals are very useful and found naturally on the Earth.
- Copper is used in all electrical appliances.
- Iron ore is mainly used to produce iron.
- Gold is considered as one of the most precious metal.
- Aluminium is extracted from Bauxite.
- Zinc is called the essential trace element.
- Potash is used for making fertilizers.

3rd Std Social Science Term III EM Unit 2.indd 133 12-10-2022 19:02:28

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I. Choose the correct answer.

1. The metal inside the wires are made up of _____ .

   a) Iron b) Zinc c) Copper

2. _____ is used for making jewels.

   a) Zinc b) Bauxite c) Gold

3. Which mineral is used as fertilizer ?

   a) Zinc Oxide b) Potash c) Iron ore

4. Zinc is found in _____ .

   a) Milk b) Biscuit c) Fish

5. Which mineral is used in Aircraft making industry?

   a) Zinc b) Bauxite c) Potash

II. Match the following.

1	Bauxite	Railway tracks
2	Iron Ore	Copper
3	Zinc oxide	Aluminium
4	Metal Wires	Soap
5	Potash	Rubber products

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III. Answer the following.

1. Name some minerals found on the earth.
2. Name some minerals that are conductors of electricty.
3. Write few uses of Copper.
4. Give a short note on Iron ore.
5. Why Zinc is called the essential trace element?






FUN WITH ACTIVITY

PROJECT

Stick the pictures of mining projects like Bauxite / Lignite.

There are a lot of mining projects running in Tamil Nadu to get resources like Bauxite, Lignite, Granite, Graphite, Limestone, Titanium and Magnesite.

3rd Std Social Science Term III EM Unit 2.indd 135 12-10-2022 19:02:39



UNIT 3

CHILD SAFETY





Learning Objectives

Childern will be able to:

- describe the importance ofChildline.
- understand child safety.
- distinguish between safe touch and unsafe touch.



HNBPX



Father is reading the newspaper. While the **son** and **daughter** peeps into the paper and finds an advertisement of 'Childline- 1098'.

3rd Std Social Science Term III EM Unit 3.indd 136 31-08-2022 11:54:56

Son: Dad, What does this **Childline number** mean?



Father: **Childline number** is a helpline number for children under the age of eigtheen.

Daughter: Oh! Do they help children in doing their homework?



Father: Ha, ha! No, dear. It helps children who are in need of help and care.

Son: I didn't know about this.



Father: Childline service was first established as a project in the year 1996. Later between 1998-99, Childline was established all across India under the Ministry of Women and Child development.

3rd Std Social Science Term III EM Unit 3.indd 137 31-08-2022 11:54:56

Son: It has been there for a very long time then.





Father: Yes! In May 2013, Childline in Ahmedabad rescued around 16 children who were working in various parts of the city. **Child Labour** is an offence in India.

Daughter: Oh! Is it?





Father: Childline helps children who

- are work as labourers.
- are abandoned by their parents.
- are differently abled.
- are live in streets.

Son: How do they exactly know where and how children need help?





Integrated Child Development Services (ICDS) is a centrally sponsored scheme of government of India for early childhood care and development.



3rd Std Social Science Term III EM Unit 3.indd 138 31-08-2022 11:54:56

ACTIVITY
Let us do

WYXRD

Which is the safest way of travelling?
Put (✔) or (✘) in the boxes.









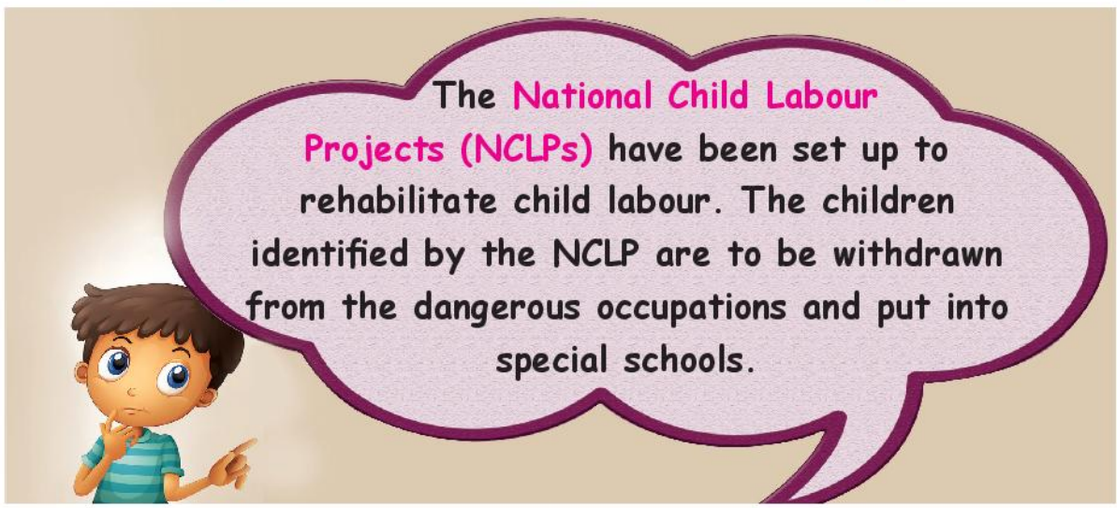




3rd Std Social Science Term III EM Unit 3.indd 139 31-08-2022 11:54:58



Father: Childline number is **1098**. One can call on this number and ask for help or inform if they find children who need help.



Son: Oh I understand now. A child's safety is very important.





Father: Well said, son. There are many laws to protect children.



Daughter: What are they?







Father: We have helplines and laws to support and protect children. But it is very important to teach children of how to be safe and aware of what's happening around them.











ACTIVITY

Let us write

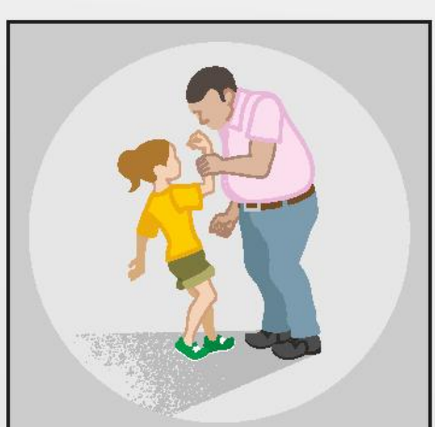
OTZHS



Which is Safe touch / Unsafe touch?



_____



_____



3rd Std Social Science Term III EM Unit 3.indd 141 31-08-2022 11:55:00



Son: Oh, good to know.



Daughter: What are you going to teach us, Dad?



Father: I will teach you about Safe touch and unsafe touch.



Son: Tell me more about it.



Father: Hugs from family, or high-fives with your friends are all safe touch.



Daughter: What is unsafe touch, dad?



Father: It is unsafe when someone touches your chest, between your legs or lips or asks you to touch theirs.



3rd Std Social Science Term III EM Unit 3.indd 142 31-08-2022 11:55:00

Son: What about when I am not well and go for a check-up to a doctor?





Father: That's a very good question, dear. Doctors may touch these parts while they are doing a check-up and either me or your mother are in the same room.

Daughter: Okay, dad.





Father: If someone touches you unsafely they might scare you to keep it as a secret. They might get you gifts that you don't tell anyone. But remember dear, you must always inform me or your mother about it.

Son: Yes, I will definitely inform you or mom.



3rd Std Social Science Term III EM Unit 3.indd 143 31-08-2022 11:55:01

LET US KNOW

The Indian Penal Code 1860, punishes people who involve in child trafficking. There is also The Prohibition of Child Marriage Act, that prevents child marriages.



The Ministry of Women and Child Development has placed the draft National Policy on Child Protection. It aims at providing a safe environment for all children.



Father: If you are ever touched on any of these parts of your body by someone you know or someone in the family, then you must inform your teacher or another family member.

Son and Daughter : Sure, Dad. We will definitely inform if something like this happens. Thank you for talking to us about this.





Father: Don't thank me because it is every parents' and teachers' duty to talk to children about this. It will help you be safe and happy.



3rd Std Social Science Term III EM Unit 3.indd 144 31-08-2022 11:55:01



Glossary

Labour	:	Heavy physical work
Prohibition	:	Refusal to approve
Rescue	:	Save from danger



Recap

- Childline helps children who are in need of care and protection.
- Childline was first established as a project in the year 1996.
- Childline helps children under the age of eigtheen who work as labourers.
- Hugs from family, or high-fives with friends are all safe touch.
- If someone touches chest, between your legs or lips of your body is unsafe touch.



3rd Std Social Science Term III EM Unit 3.indd 145 31-08-2022 11:55:01



EVALUATION



I. Choose the correct answer.

1. What is the Childline number?
   a) 1099 b) 1098 c) 1089

2. Childline helps children under the age of _____.
   a) twenty b) nineteen c) eighteen

3. Childline helps children who _____.
   a) work as labourers b) needs help with homework
   c) both a and b

4. A doctor touching a child's private part of the body while check-up while the child's father or mother is in the same room is _____ touch.
   a) unsafe b) safe c) none of the above

5. If someone gives you a unsafe touch, what will you do?
   a) inform parents b) keep it as a secret
   c) both a and b

II. Write true or false.

1. Child labour is not an offence. ( )
2. If someone is asking to touch the private parts of their body, it is unsafe touch.( )
3. If someone gives us an unsafe touch, we must tell our parents or teacher. ( )

3rd Std Social Science Term III EM Unit 3.indd 146 31-08-2022 11:55:03

4. Indian Penal Code 1820 punishes people involved in child trafficking. ( )
5. The Childline helps children who work as labourers. ( ).

IV. Answer the following

1. Write a short note on Childline.
2. When was Childline established? Which ministry does it fall under?
3. What is safe touch?
4. What is unsafe touch?
5. What should you do if someone touches you unsafely?



FUN WITH ACTIVITY

PROJECT

Collect more information about child welfare schemes.

3rd Std Social Science Term III EM Unit 3.indd 147 31-08-2022 11:55:04

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