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Department Of School Education

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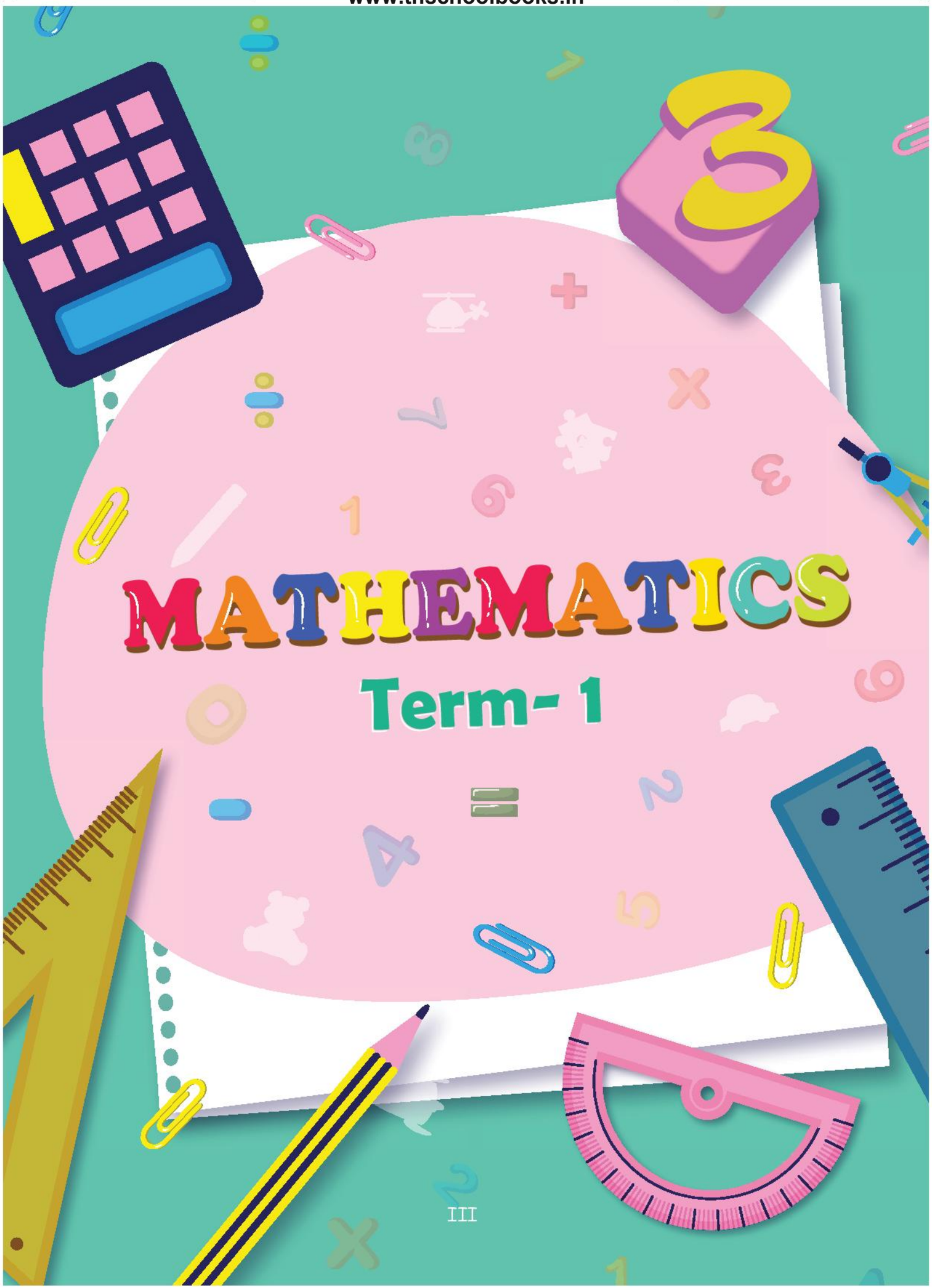
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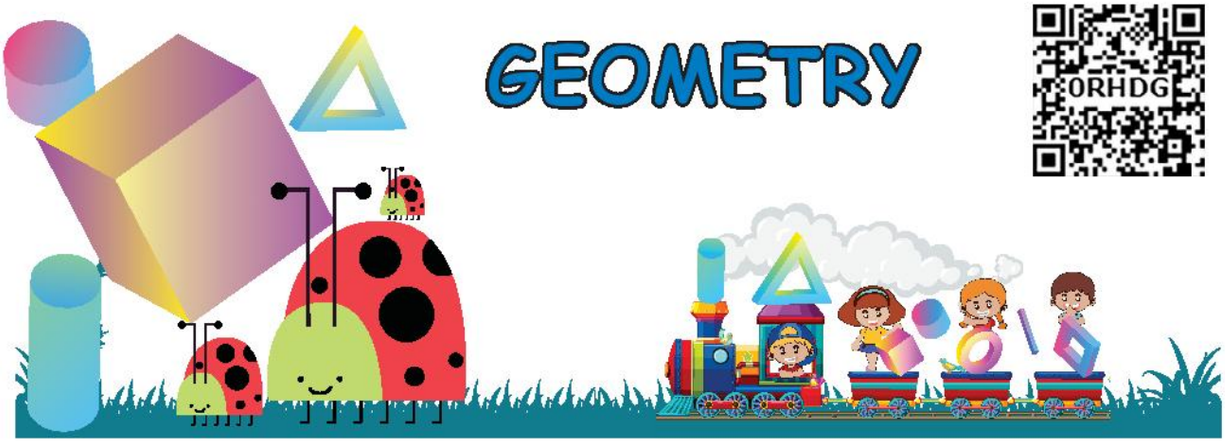
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ASSESSMENT



UNIT-1

GEOMETRY



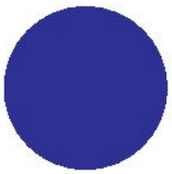
Travel Through

Basic Shapes


Square

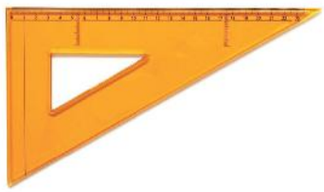

Rectangle

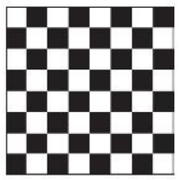

Triangle


Circle

Let us know the shapes of objects around us. Identify the shapes of the objects and Circle the squares with **Red**, rectangles with **Green**, triangles with **Yellow** and circles with **Blue** colours. Connect the objects of similar shapes.

















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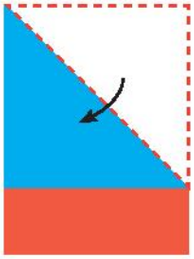
1.1 Construction of 2D shapes

Let us make a square by folding a paper by following the given steps.

Step 1:
Take a paper

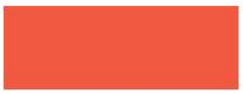


Step 2:
Fold the paper as shown in the figure.

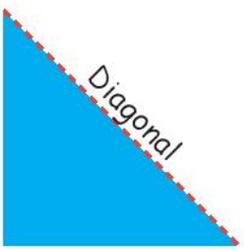


Step 3:
Shade the extra portion in the bottom with red colour. Tear it off and keep it aside.





Step 4: Open up the triangle. What do you observe?
You could see a square.
The crease in the middle of the square is called the 'Diagonal of the square'.
You can note that the diagonal divides the square into two triangles.



Try This

Can you find the other diagonal of the square by folding it the other way? If so, how many diagonals can you find for a square?.
Observe the number of sides and corners of a square.
A square has **four** sides, **four** corners and **two** diagonals.



properties of a square

We shall summarise the properties of a square as follows:

- Square has four sides.
- All the four sides are equal.
- Square has four corners.
- Square has two diagonals.
- The two diagonals are equal.

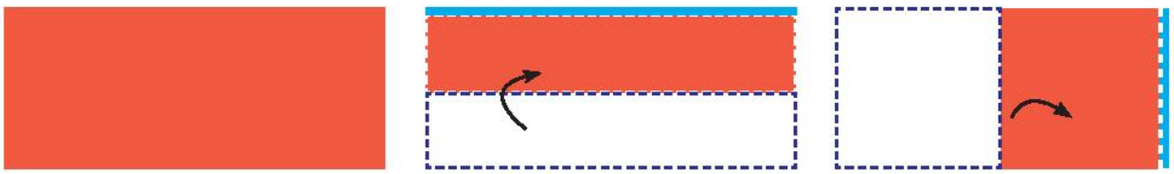


Teacher's note: Guide the children to do this paper folding activity.

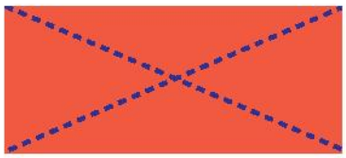
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Let us make a rectangle by folding a paper

Take the red coloured piece which was kept aside. Observe its sides. Fold the opposite sides of the rectangle.



What do you observe? The sides coincide. Now we get opposite sides equal. Hence in a rectangle, opposite sides are equal.

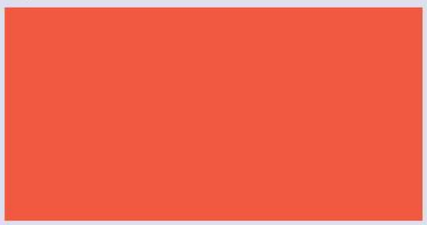


Fold the opposite corners as we did in the square. Observe the crease. It shows the diagonal of the rectangle.

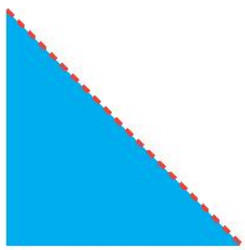
properties of a rectangle

The properties of a rectangle are as follows:

- Rectangle has four sides.
- Two opposite sides are equal.
- Rectangle has four corners.
- Rectangle has two diagonals.
- Two diagonals are equal.



Let us make a triangle by folding a paper



Fold the square along any of these diagonals to form a triangle.

Observe the Sides and corners of the triangle.

A triangle has **three** sides and **three** corners.

Cut the paper and make triangles of different kind.

Observe and discuss about the length of the sides of the triangle.

Let us know



Isosceles triangle



Equilateral triangle



Scalene triangle



Try This How many triangles can be made out of the square paper?

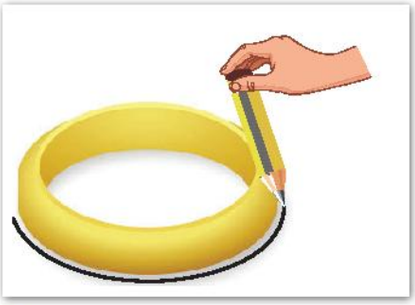
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Let us draw a circle using pencil and Bangle.

Step 1:
Place a bangle on the paper as shown in figure.



Step 2:
Trace the outline of the bangle with a curved line with the pencil until you reach the starting point, we get a circle.



properties of a circle

On observing the circle drawn, we shall write the properties of it as follows:

- Circle has no sides.
- Circle has no corners.
- Circle has a centre point.



Activity 1

Write the names of few objects in everyday use and mention their geometrical shapes. Example, Paper- Rectangle

Practice

1) Triangle has _____ corners.
2) Four sides of a square are _____.
3) Circle has _____ sides.
4) Rectangle has _____ diagonals.
5) Opposite sides of a rectangle are _____.
6) Circle has _____ centre point.

Teacher's note: Facilitate the children to explore the properties of shapes in various aspects.

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1.2 Properties of 3D Objects

We can see many things around us have straight lines and curved lines.

Activity 3

Tick the appropriate boxes to show the lines found in the given objects.

Objects					
Straight line					
Curved line					

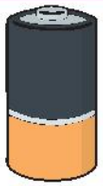
Plane Surface: Surface of few objects like walls, floors, papers and top of a table are flat. Flat surfaces are otherwise called as plane surfaces or planes. Cubes and cuboids have flat surfaces.

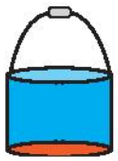





Curved Surface: Surfaces of few objects such as ball, flowerwase, pot are curved. Cone,Cylinder and sphere have curved surfaces.

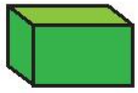
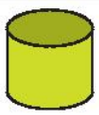
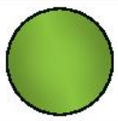







Practice

Tick the appropriate columns.

Shapes					
Plane surface					
Curved surface					
Plane surface and Curved surface					

Teacher's note: Discuss about the types of lines found in objects in everyday use and enable the children to draw them in above tabular column.

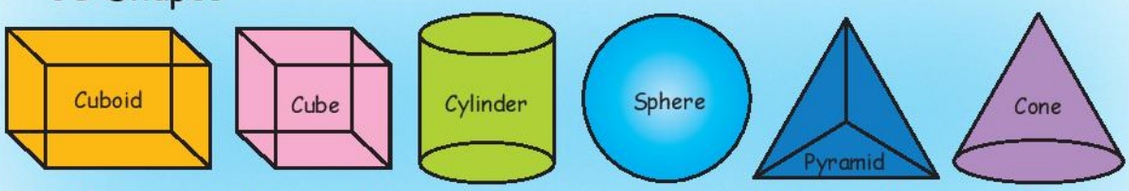
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Look at the things around you.

Identify the shapes of the objects. Observe the dimensions of these objects.



3D Shapes



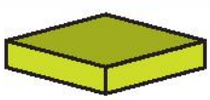
Solid shapes have 3 dimensions namely length, breadth, and height. These are shortly called as 3D shapes.

Let us know

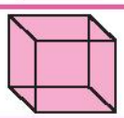
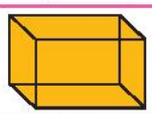
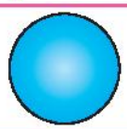
A Cube is a solid shape made of squares. It has 6 faces, 12 edges and 8 vertices.
A Cuboid is a solid shape made of rectangles. It has 6 faces, 12 edges and 8 vertices.
A Sphere is a solid shape of circles. It has 1 face, no edges and no vertex.

Practice

1. Match the following.

	cone	
	cube	
	cylinder	
	sphere	
	cuboid	

2. Complete the following table by filing the properties of 2D and 3D shapes.

S. No	Figure	2D or 3D	Name of the Shape	Number of sides	Number of edges	Number of corners	Number of diagonals
1		2D	Rectangle				
2		2D	Traingle				
3		2D	Circle				
4		2D	Square				
5		2D	Traingle				
6		2D	Rectangle				
7		3D	Cube				
8		3D	Cuboid				
9		3D	Sphere				

Teacher's note: Facilitate the children to draw the front and side views of 3D shapes by providing the objects.

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UNIT-2

NUMBERS



Travel Through



1. Look at the above picture and answer the following.

Flowers	Number and Number name of flowers
	_____
	_____
	_____

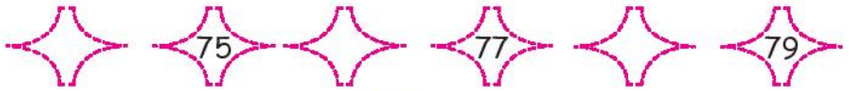
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2. Fill in the blanks in each of the figures with missing numbers.

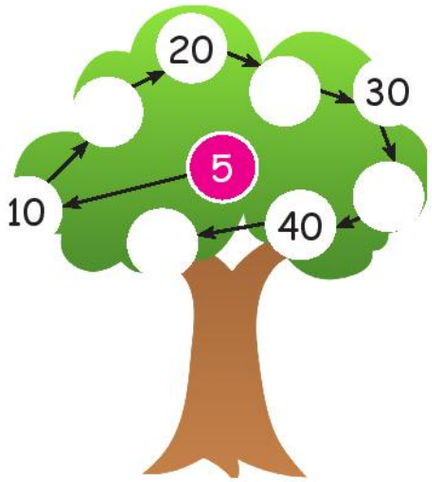
a.



b.



c.



3. Complete the given facts by placing '+' for addition and '-' for subtraction.

9 ___ 3 = 12	92 ___ 20 = 72
80 ___ 11 = 91	12 ___ 3 = 9
56 ___ 21 = 35	75 ___ 17 = 92

2.1 Numbers sequence upto 1000.

Recall

- Numbers 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are one digit numbers.
- Numbers from 10 to 99 are two-digit numbers.

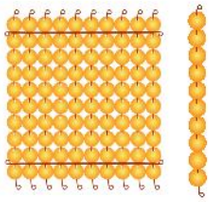
99 is the biggest two-digit number.
10 is the smallest two-digit number.

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Formation of the numbers such as 10, 100 and 1000.

when 1 is added with 9 ,we get 10.

Tens	Ones
	9
	1
1	0



	Hundred	Tens	Ones
		9	9
+			1
	1	0	0

When we add 1 with 99 we get the numeral 100 which is represented by the number name "HUNDRED", the smallest three digit number.
One hundred has 10 tens.One hundred has 100 ones.

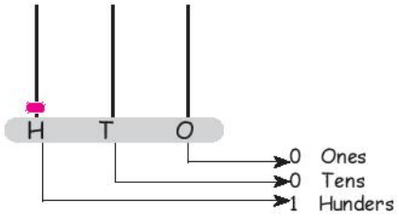
	Th	H	T	Ones
		9	9	9
+				1

	Th	H	T	Ones
		9	9	9
+				1
	1	0	0	0

When we add 1 with 999 we get the numeral 1000 which is represented by the number name "Thousand", the smallest four digit number.
One thousand has 10 hundreds.one thousand has 100 tens.

Read and write all three digit numbers and number names.

We shall represent 100 in an abacus as shown below.



	H	T	O
	1	0	0

No beads in the ones place shows 0 ones.

No beads in the tens place shows 0 Tens.

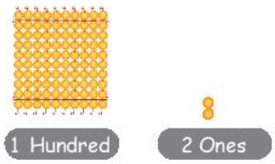
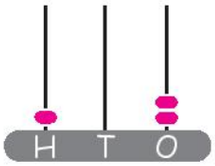
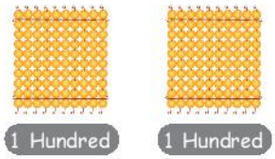
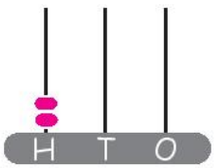
1 bead in the hundreds place shows 1 hundred.

The place value of hundreds place is higher than tens place.

Hundred (or) 100 is the smallest three digit number.

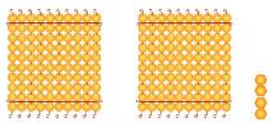
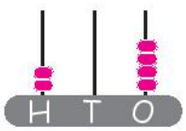
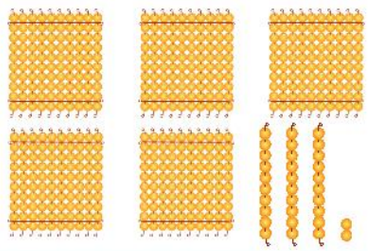
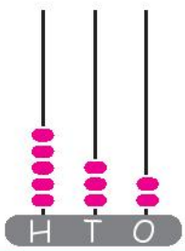
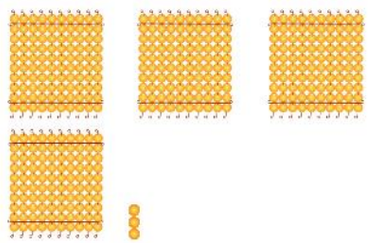
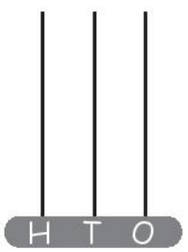
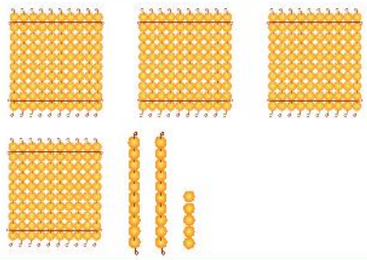
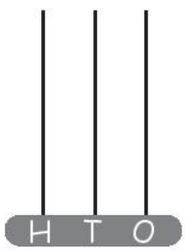
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Examples:

Number Blocks	Abacus	Numeral form	Number name
		H T O 1 0 2	One hundred two
		H T O 2 0 0	Two hundred

Activity 1

10 Ones	=	1 Ten
10 Tens	=	1 Hundred
10 Hundreds	=	1 Thousand.

Number Blocks	Abacus	Numeral form	Number name
		H T O 2 0 4	Two hundred four
		H T O 	_____ _____
		H T O 	_____ _____
		H T O 	_____ _____

Teacher's note: Let the children explore to represent many 3 digit numbers by using math kit.

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Read and write the numbers from 101 to 200.



101	111	121	131	141	151	161	171	181	191
102						162		182	
		123							193
104							174		
	115			145					
106								186	
			137			167			197
108							178		
110	120	130	140	150	160	170	180	190	200



Activity 2

Complete the number sequence.

231	232						238		
		453				457			
	302								
581				585					
			644					649	
				715					720
991							998		



Teacher's note: Give practice to children to write the numbers upto 1000.

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Number names

The number name of the numeral 101 is written by adding one hundred with one as one hundred one. The numeral 199 is written as one hundred ninety nine.

Write the numerals for the given number names.

Number names	Numerals
Five hundred thirty five	535
One hundred seven	107
One hundred twenty eight	
Six hundred	
Nine hundred five	



Activity 3

Write the number names for the following Numerals.

Numerals	Number name
150	One hundred fifty
225	
306	
535	
907	Nine hundred seven
992	

Place value of a numeral in the given number.



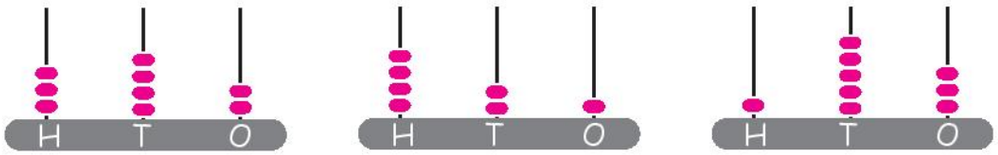
Activity 4

Write the place value of the underlined digit in the given numbers.

Numeral	Place value	Numeral	Place value
2 <u>9</u> 6	Tens	3 7 <u>5</u>	
2 9 <u>6</u>	Ones	5 <u>7</u> 8	
<u>2</u> 9 6	Hundreds	7 8 <u>6</u>	
1 <u>2</u> 6	Tens	6 <u>9</u> 4	
<u>4</u> 1 7		<u>7</u> 2 9	
6 3 <u>8</u>		9 <u>1</u> 8	
<u>9</u> 4 5		<u>8</u> 3 6	

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Find the numbers represented in the abacus by writing their place value.



3 - Hundreds

4 - Tens

2 - Ones

$300 + 40 + 2$

342

Write the given numbers in expanded form.

Number	Expanded Form
246	$200 + 40 + 6$
570	$500 + 70 + 0$
637	
603	
989	

Write the simplified form of the number given in expanded form.

Expanded form	Simplified form
$300 + 90 + 8$	398
$200 + 50 + 6$	
$900 + 80 + 5$	
$500 + 50 + 7$	

Skip counting starting from any given number.

Example:

1. 10, 11, 12, 13, 14, 15 → Skip counted in ones

2. 62, 64, 66, 68, 70, 72 → Skip counted in twos

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Complete the following by skip counting in 5s ,10s and 100s.

1. 250, 255, ____, ____, 270, ____

2. 500, 510, ____, 530, ____, ____

3. 100, 200, ____, ____, ____, 600

Odd numbers and even numbers

Even numbers 0 2 4 6 8 10 12

Odd numbers 1 3 5 7 9 11 13

> Numbers ending with 1, 3, 5, 7 and 9 are called ODD numbers.
> Numbers ending with 0, 2, 4, 6 and 8 are called EVEN numbers.

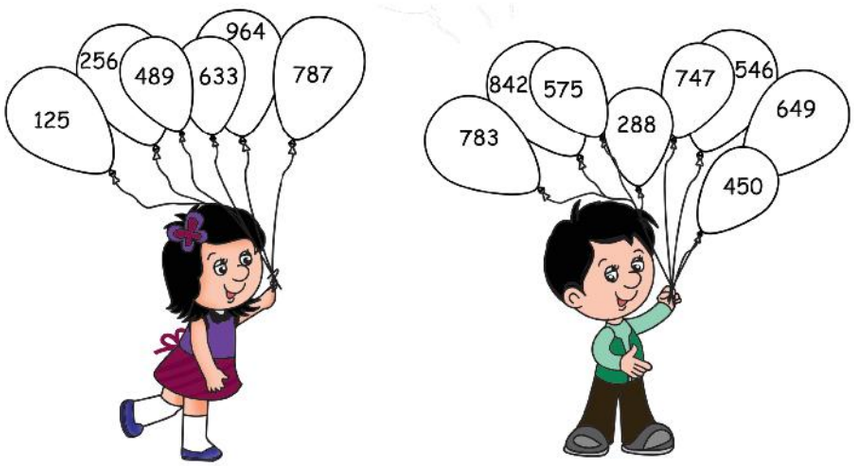
Activity 5

Circle the even numbers	Circle the odd numbers
8, 69, 70, 84, 99	7, 26, 33, 61, 84
112, 131, 156, 170, 186	105, 116, 125, 142, 151
226, 300, 303, 440, 478	219, 232, 245, 357, 390
542, 570, 575, 600, 610	540, 555, 557, 603, 609
931, 948, 952, 982, 999	918, 919, 935, 953, 998

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Activity 6

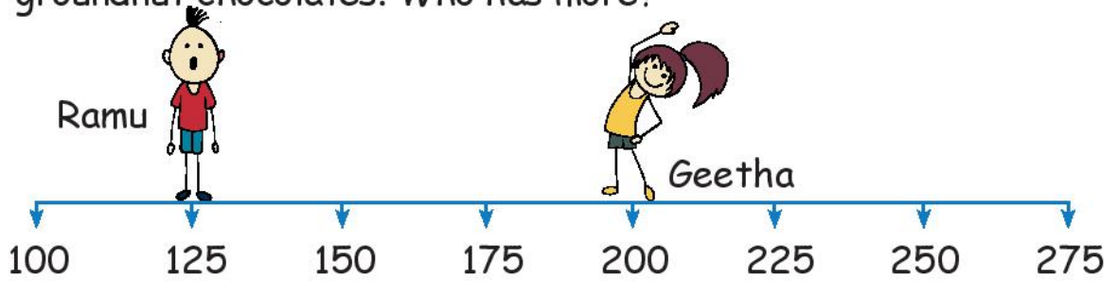
Colour the balloons with odd number by yellow and even number by red.



In number sequence, after every odd number there is an even number. Similarly after every even number there is an odd number.

2.2 Comparison of numbers

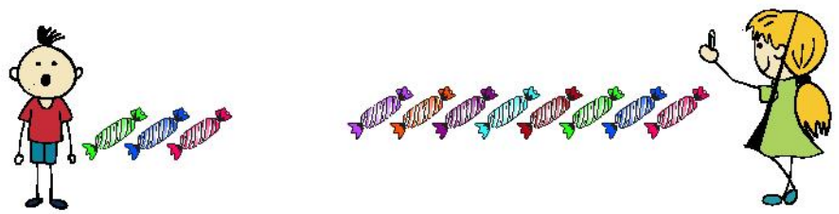
Ramu has 125 groundnut chocolates and Geetha has 200 groundnut chocolates. Who has more?



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Greater and smaller numbers

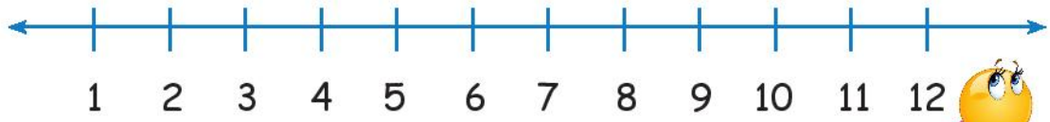
Amuthan has 3 chocolates and his sister Meenakshi has 8 chocolates. Who has more chocolates?



In a number line, any number which comes before a number is smaller than that number.

In a number line, any number which comes afer a number is greater than that number.

In a number line 3 comes before 8 or 8 comes after 3.



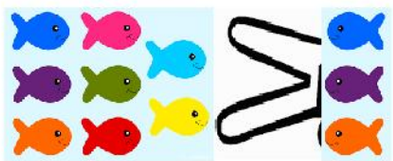
3 is smaller than 8.

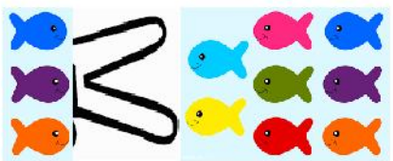
8 is greater than 3.

Meenakshi has more chocolates.

Know more
'0' does not have any value at the beginning of a number. Why?

Using symbols





3 is smaller than 8

we write $3 < 8$

27 is smaller than 40

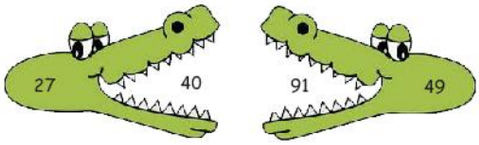
we write $27 < 40$

8 is greater than 3

we write $8 > 3$

91 is greater than 49

we write $91 > 49$



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1. Comparison of numbers with different number of digits.

The number which has more number of digits is the greater number.
The number 115 has 3 digits and 89 has only 2 digits.
So 115 is greater than 89. We write 115 > 89.

Compare 115 and 89

H	T	O
1	1	5

H	T	O
	8	9

2. Comparison of numbers with equal number of digits.

Step 1 : If the number of digits are equal (say 3 digits), compare the digit in the hundreds place. The number which has a greater value in the hundreds place is greater. 2 is greater than 1. So, 250 is greater than 160. We write 250 > 160. We can also say 160 < 250.

Compare 160 and 250

H	T	O
1	6	0

H	T	O
2	5	0

Look at the hundreds place

Step 2: If the digits in the hundreds place are same, compare the digits in the tens place. The number which has the greater digit in the tens place is the greater number.
The digit in the hundred place are the same. Compare the digits in the tens place. 5 is greater than 4. so, 151 is greater than 143. We write 151 > 143. We can also write 143 < 151.

Compare 143 and 151

H	T	O
1	4	3

H	T	O
1	5	1

Look at the tens place

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Step 3: If the digits in the hundreds and the tens place are same, compare the digits in the ones place. The number which has the greater digit in the ones place is the greater number. The digits in the hundreds place and tens place are the same. Comparing the digits in the ones place.

Compare 141 and 148

H	T	O
1	4	1

H	T	O
1	4	8

Look at the ones place

8 is greater than 1

So the number 148 is greater than 141.

We write 148 > 141

We can also write 141 < 148.

3. Comparing numbers with same value in all the digits

The digits in the hundreds place, tens place and ones place are the same.

So, 536 = 536

H	T	O
5	3	6

H	T	O
5	3	6

Let us know

The greatest three digit number is 999.
The smallest three digit number is 100.

Try this

Put appropriate symbol (<, >, and =) in the boxes provided.

103 ☐ 438 710 ☐ 710

250 ☐ 069 614 ☐ 618

408 ☐ 308 719 ☐ 917

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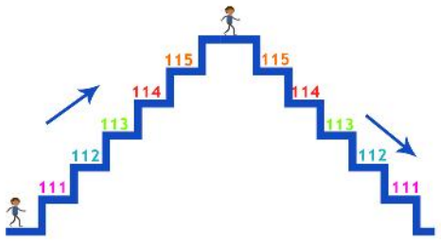
2.3 Ordering

Ascending and Descending order.

111, 112, 113, 114, 115

When we write the numbers from smaller to greater, we call it **"Ascending order"**.

When we write numbers from greater to smaller, we call it **"Descending order"**.



Try this

Write the even numbers between 245 and 255 in descending order.

Example:

Let us arrange the numbers 235, 230, 238 in ascending order and in descending order.

Ascending order

230 < 235 < 238

230, 235, 238

Descending order

238 > 235 > 230

238, 235, 230

Try this

1. **Arrange the following numbers in ascending order.**

a. 55, 63, 40, 8

b. 217, 201, 215, 219

c. 50, 405, 109, 600

d. 785, 757, 718, 781

2. **Arrange the following numbers in descending order.**

a. 212, 503, 369, 60

b. 051, 100, 810, 167

c. 323, 303, 332, 33

d. 205, 210, 290, 300

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Forming 3 digit numbers using given numbers as digits

Consider the numbers 2 and 7.

We shall form the greatest and smallest two digit numbers using these numbers.

The two-digit numbers formed using 2 and 7 are 27,72,22,77.

(77 is the greatest and 22 is the smallest 2 digit numbers)

Similarly, 7, 4 and 8 are given numbers.

We shall form the greatest and smallest three digit number using these numbers (without repetition).

748, 784, 874, 847, 487, 478

Arrange the given digits from the smallest number to greatest number, we get **ascending order**.

478, 487, 748, 784, 847, 874

Arrange the above from the greatest number to smallest number, we get **descending order**.

874, 847, 784, 748, 487,478

874 is the greatest number and 478 is the smallest number.



Practice

1. **Form greatest and smallest numbers using the given numbers as digits (without repetition of digits)**

Numbers	Greatest number	Smallest number
5, 0, 9		
6, 3, 7		
4, 0, 1		
9, 9, 0		

2. **Complete the following number sequence.**

111, 222, 333, 444, ..., ..., ...

150, 155, 160, 165, ..., ..., ...

210, 310, 410, 510, ..., ..., ...

333, 433, 533, 633, ..., ..., ...

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3. Write the appropriate numerals for the expanded form.

a. 4 Hundreds; 5 Tens; 0 Ones ____

b. 3 Hundreds; 0 Tens; 1 One ____

c. 5 Hundreds; 8 Tens; 9 Ones ____

d. 8 Hundreds; 0 Tens; 5 Ones ____

4. Write the number names.

Numeral	Number name
156	
340	
408	
696	

5. Fill in the blanks.

a. 405 has ____ Hundreds ____ Tens ____ ones

b. 547 has ____ Hundreds ____ Tens ____ ones

c. 680 has ____ Hundreds ____ Tens ____ ones

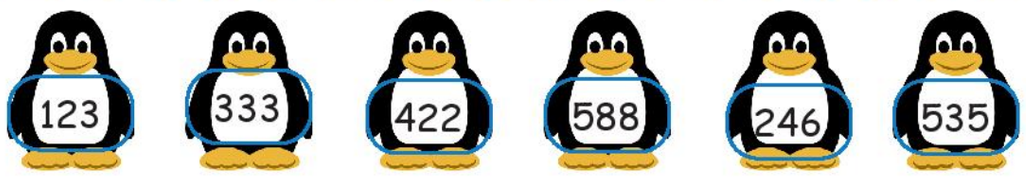
6. Write the place value for the bubbled digits.

a. (1) 9 8 _____

b. 9 0 (8) _____

c. 5 (4) 3 _____

7. Write down the odd and even numbers seperately.



a. Odd numbers: _____ _____ _____

b. Even numbers: _____ _____ _____

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8. write appropriate symbol (<, >, =) in the box.

105 ◯ 150	761 ◯ 683
419 ◯ 547	660 ◯ 660
394 ◯ 387	983 ◯ 990

6YHNW

9. Write the given numbers in ascending and descending order.

326 323 301 356 365 399 308 340

Ascending order: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Descending order: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

10. Using the numbers 6, 8 and 5 only once form the greatest and smallest 3 digit number.

Greatest number: ☐ Smallest number: ☐

2.4 Addition and Subtraction.

Addition

Recall

a. 70 + 35 = ☐

b. 68 + 23 = ☐

c. 51 + 37 = ☐

d. 55 + 18 = ☐

e. 56 + 33 = ☐

f. 57 + 33 = ☐

g. 70 + 35 = ☐

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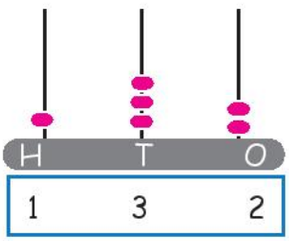
Addition of Three Digit Numbers (Without Regrouping)

Example:

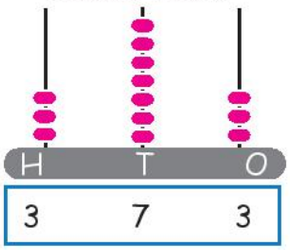
Add 132 and 241

	H	T	O
	1	3	2
+	2	4	1

In abacus, first put 132 as:



then add 241, by putting 1 more in ones, 4 more in tens and 2 more in hundreds.



Addition of numbers is called sum of the numbers.

sum = 373

Example: Add 342 + 515 + 12

step 1: add ones

	H	T	O
	3	4	2
+	5	1	5
		1	2

step 2: add tens

	H	T	O
	3	4	2
+	5	1	5
		1	2
			9

step 3: add hundreds

	H	T	O
	3	4	2
+	5	1	5
		1	**2**
		6	**9**

	H	T	O
	3	4	2
+	5	1	5
	1	**2**	
	8	**6**	**9**

Sum = 869



Try this

Add the following numbers

1.

	H	T	O
	4	4	1
+	3	2	6
			2

2.

	H	T	O
	5	6	2
+	2	0	4

3.

	H	T	O
	8	1	5
+	1	5	3
		2	1

4. 34 + 452+ 3

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Addition of Three Digit Numbers (With Regrouping)

Example: Add 556 and 194

Add ones

	H	T	O
		1	
+	5	5	6
	1	9	4
			0

6 + 4 = 10 Ones = 1 Ten

With regrouping.

10 ones = 1 Ten + 0 ones

So, we put 0 in ones place and carry over 1 to ten place.

Add Tens

	H	T	O
		1	
+	5	5	6
	1	9	4
		5	0

1 + 5 + 9 = 15 tens

15 tens = 1 hundred + 5 tens

So, we put 5 in tens place. And carry over 1 to hundred place.

Add hundreds

	H	T	O
	1	1	
+	5	5	6
	1	9	4
	7	5	0

1 + 5 + 1 = 7 hundreds

So, we put 7 in hundreds place.

Sum = 750



Try this

Add the following numbers.

a.
$$\begin{array}{r} 709 \\ +\ 261 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 339 \\ +\ 202 \\ \quad\ 28 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 508 \\ +\ 162 \\ \quad 240 \\ \hline \end{array}$$

d. 921+20+51

e. 28+195+6

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SUBTRACTION

Recall:

a. 45 - 35 =

b. 87 - 69 = □

c. 49 - 38 = □

d. 99 - 55 = ____

e.
  63
- 17
____
____

f.
  70
- 9
____
____

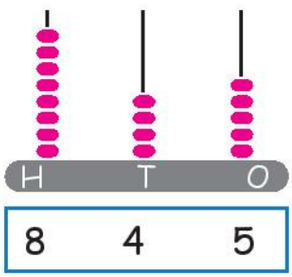


Subtraction of Three Digit Numbers (Without Regrouping)

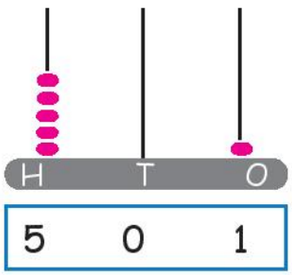
Example: Subtract 344 from 845

	H	T	O
	8	4	5
−	3	4	4

In abacus, first put 845 as:



Remove 4 from ones 4 from tens and 3 from hundred as



Subtraction of a number from another number is called difference of the two numbers.

Difference = 501

EV3WP

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Example: Subtract 213 from 735

	H	T	O
	7	3	5
–	2	1	3

Subtract **ones**

	H	T	O
	7	3	5
–	2	1	3
			2

Subtract **tens**

	H	T	O
	7	3	5
–	2	1	3
		2	2

Subtract **hundreds**

	H	T	O
	7	3	5
–	2	1	3
	5	2	2

Difference = 522



Try this

Subtract the following numbers.

a.

	H	T	O
	5	4	4
–		2	3

b.

	H	T	O
	7	6	5
–	4	0	1

c.

	H	T	O
	8	4	5
–	2	3	4

Subtraction of Three Digit Numbers (With Regrouping)

Example: Subtract 138 from 264

	H	T	O
	2	6	4
–	1	3	8

Step:1
Subtract **ones**

	H	T	O
		5	14
–	2	6	4
	1	3	8
			6

$14 - 8 = 6$

Step:2
Subtract **tens**

	H	T	O
		5	14
–	2	6	4
	1	3	8
		2	6

$5 - 3 = 2$

Step:3
Subtract **hundreds**

	H	T	O
	1	5	14
–	2	6	4
	1	3	8
	1	2	6

$2 - 1 = 1$

We cannot subtract 8 from 4.
So regroup
1 ten from 6 tens into 10 ones.

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Try this

Subtract the following numbers.

a. 5 4 0 − 3 5 3

b. 7 6 5 − 4 3 8

c. 8 0 5 − 2 4 6

Addition and subtraction by using standard algorithm

Example: Add 675 and 136

Step:1

Add ones:

	H	T	O
		1	
	6	7	5
+	1	3	6
			1

5 + 6 = 11 ones,

11 ones = 1 tens + 1 one put 1 in ones place and carry over 1 to tens place.

Step:2

Add tens

	H	T	O
	1	1	
	6	7	5
+	1	3	6
		1	1

1 + 7 + 3 = 11 tens

11 tens = 1 hundred + 1 tens. put 1 in tens place and carry over 1 to hundreds place.

Step:3

Add hundreds

	H	T	O
	1	1	
	6	7	5
+	1	3	6
	8	1	1

1 + 6 + 1 = 8hundreds

put 8 in hundreds place

Puzzle

I am a 3 digit number. If you add 5 tens with me, I will become greatest 3 digit number Find me.

Teacher's note: Help the children to do the Addition problems by using **abacus**.

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Example:

Subtract 386 from 724



Step:1

Subtract ones

	H	T	O
		1	14
	7	~~2~~	~~4~~
+	3	8	6
			8

Borrow 1 ten from 2 tens then add to 4 ones we get 14 in one's place.

$14 - 6 = 8$

Step:2

Subtract tens

	H	T	O
		11	
	6	1	~~14~~
+	~~7~~	~~2~~	~~4~~
	3	8	6
		3	8

Borrow 1 hundred from 7 hundreds then add to 1 ten we get 11 in ten's place.

$11 - 8 = 3$

Step:3

Subtract hundreds

	H	T	O
		11	
	6	1	~~14~~
+	~~7~~	~~2~~	~~4~~
	3	8	6
	3	3	8

$6 - 3 = 3$

Difference = 338

Play with numbers

choose any 3 numbers Frame a 3- digit numbers and reverse it. Find their sum and difference.



Teacher's note: Help the children to do the Subtraction problems by using **abacus**.

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Simple statement problems.

i. 452 Mangoes are grown in farm A and 349 in farm B. Find the total number of mangoes grown in both farms.

Mangoes in farm A	=	452
Mangoes in farm B	=	349
Total number of mangoes	=	801

ii. Amuthan saved rupees 125 on the first month and rupees 200 in the second month. Find the total amount saved by him in two months

Savings in the first month	=	
Savings in the second month	=	
Total savings	=	

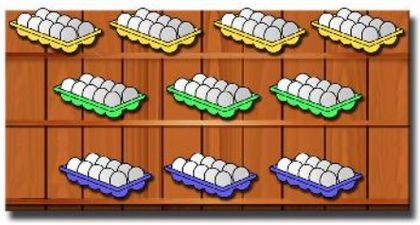
iii. Kumar earned rupees 800 in a day and spent rupees 450. Find the amount saved by him.

Kumar's one day salary	=	
Amount spent	=	
Savings amount	=	



Try this

There were 10 egg trays each with 10 eggs in Valavan's egg shop. He sold eggs in 3 trays and found that eggs in 2 trays were rotten. find the number of eggs remaining in Valavan's shop.



Total number of eggs in Valavan's shop= _____.

Number of eggs sold + number of eggs rotten = ____+_____ =_____.

Number of eggs remaining in the shop = _____.

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Frame addition and subtraction questions for the picture below. One is done for you.



1. Rani chose 2 tops from the hanger and 3 tops from the rack. Find the total number of shirts chosen by her.

2.

Frame the questions related to the given addition and subtraction facts.

281 +240 = ?	A dairy booth sells 281 bottles of milk on first day and 240 bottles of milk on second day. Find the total number of bottles sold on both the days.
352 - 148 = ?	There are 352 oranges on a tree 148 oranges were plucked from the tree. How many oranges are remaining in the tree ?

Practice Frame questions for the given addition and subtraction facts and write in your notebook.

i. 118 + 212 = ?

ii. 717-515= ?

iii. 200 + 300 = ?

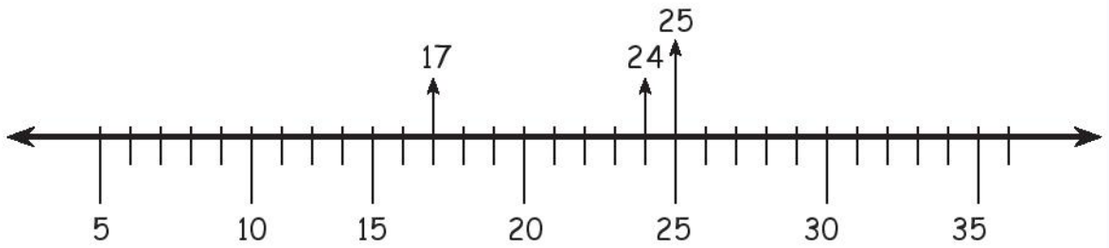
iv. 243 - 169 = ?

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2.5 Estimation

Estimate the sum and difference of the two given numbers by rounding off to nearest 10s.

Let us round off three numbers 17, 24 and 25 to the nearest 10s.



- We can see that 17 is between 10 and 20 but it is more closer to 20 than 10. So, 17 is rounded off to 20.
- 24 is between 20 and 30 but it is more closer to 20 than 30. So, 24 is rounded off to 20.
- 25 is between 20 and 30. But it is exactly on the middle point. So, 25 is rounded off to 30.

We can easily estimate the sum and difference of any 2 numbers by rounding off them to nearest values and adding or subtracting them.

Example:

1. **Estimate the sum by rounding off to the nearest value and find the actual sum.**

Problems	Estimated Answer	Actual Answer
24	20	24
+ 27	+ 30	+ 27
sum	50	51

2. **Estimate the difference by rounding off to the nearest value and find the actual difference.**

Problems	Estimated Answer	Actual Answer
15	20	15
– 13	– 10	– 13
Difference	10	2

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Practice

1. Answer the following.

a. 803 + 237 = ____

b. 654 + 209 = ____

c. 493 + 135 = ____

DVHPY

d. 981 − 165 = ____

e. 518 − 139 = ____

f. 782 − 375 = ____

2. Round off to the nearest 10.

a. 19_____ b. 25 _____ c. 21_____ d. 47_____

3. Estimate the sum to the nearest ten and also find the actual sum.

Problems	Estimated Answer	Actual Answer
33	30	
+ 35	+ 40	
sum		

Problems	Estimated Answer	Actual Answer
26		
+ 31		
sum		

4. Estimate the difference to the nearest ten and also find the actual difference.

Problems	Estimated Answer	Actual Answer
50		
− 41		
Difference		

Problems	Estimated Answer	Actual Answer
28		
− 22		
Difference		

Teacher's note: The teacher should be prepared to give a variety of questions, puzzles, and activities according to the skills of the students.

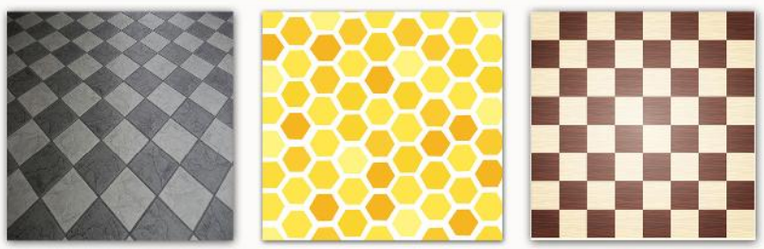
3rd_Unit_02_Numbers_Term 1.indd 33 07/02/2023 11:36:31

UNIT-3

PATTERNS



Observe the pictures given below.



Patterns

Patterns are formed when objects, events and numbers are repeated uniformly in a specific way.

3.1 Patterns in shapes

Creating patterns of regular and irregular shapes by stamping.

Example: **block patterns created using handprints and foot prints are shown below.**



3rd_Unit_03_Patterns_Term 1.indd 34 07/02/2023 14:49:57

Activity 1

Create patterns by impressing the following on a paper.

(i) Using dry leaves /fallen leaves.
(ii) Fingers, hands, toes, feet.
(iii) Using bangles.





Activity 2

Create patterns on your own by impressing the following on a chart paper and decorate your class room.

i. seeds ii. buttons iii. bottle lids

My own patterns

Pattern in geometrical shapes

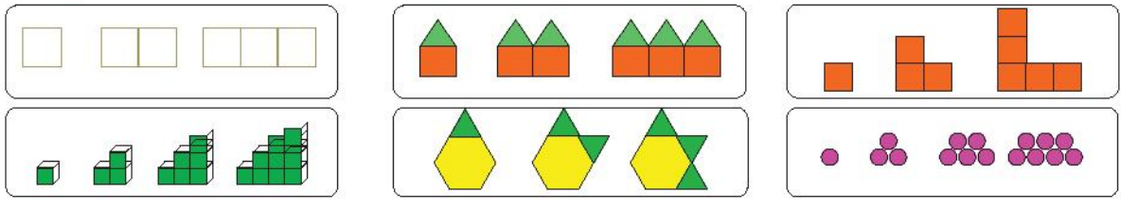
There are two types of patterns. They are

☺ Growing patterns. ☺ Repeated patterns.

Growing Patterns

If some patterns and designs increase or grow with straight lines and geometrical forms, they are called growing patterns.

Example:



Try this

Create some growing patterns using circle and square.

3rd_Unit_03_Patterns_Term 1.indd 35 07/02/2023 14:49:57

Practice

a. Continue the growing patterns.

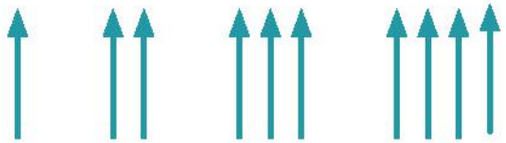
1.  _____

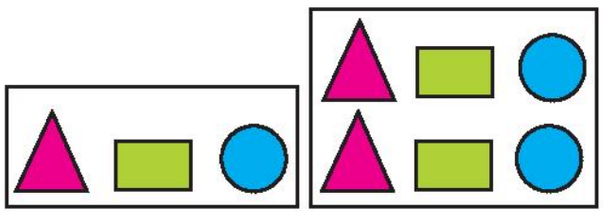
2.  _____

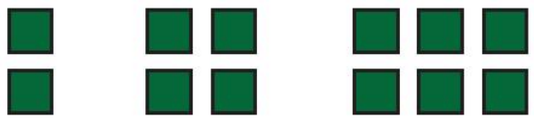
3.  _____

4.  _____

b. Continue the growing pattern.

1.  _____

2.  _____

3.  _____

Repeated Patterns

If some patterns and designs repeat with straight lines and geometrical shapes, they are called repeated patterns.

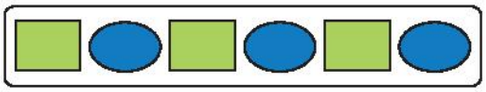
Example:

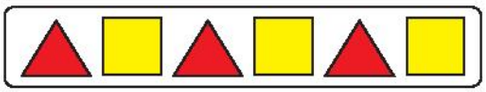
1. 

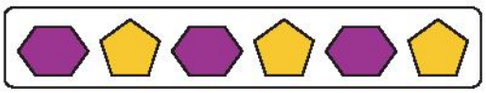
2. 

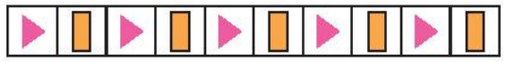
3. 

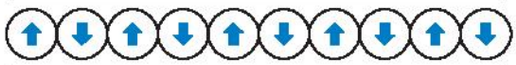
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4. 

5. 

6. 

7. 

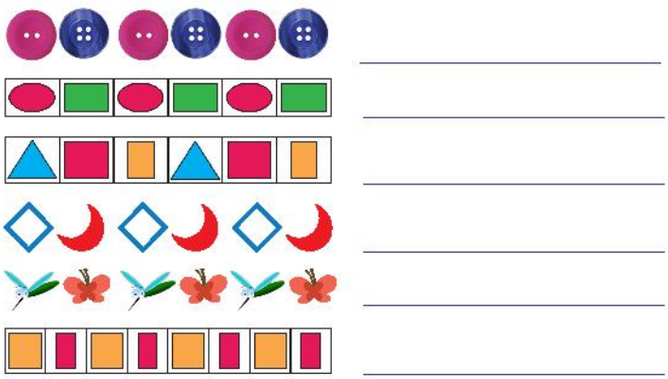
8. 

9. 

10. 

Practice

Observe the repeating patterns and complete the next 3 steps.



Activity 3

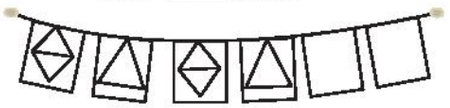
Complete the buntings by following the pattern.

1. 

2. 

3. 

4. 

5. 

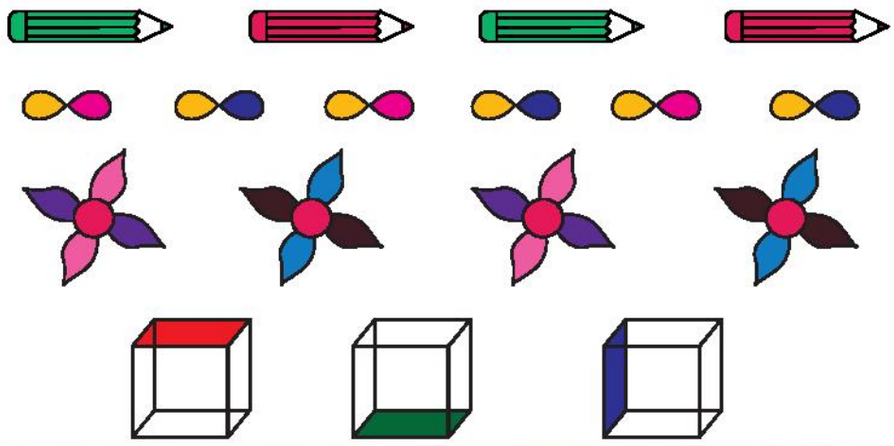
Try this

Draw some repeated patterns of your own.

1.

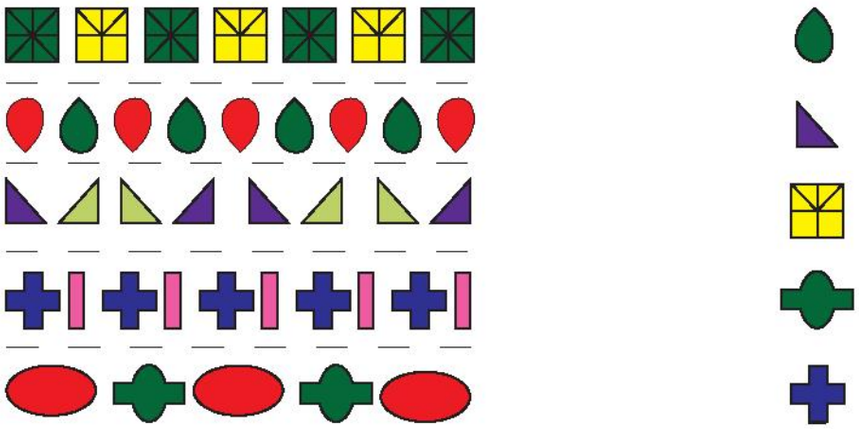
3rd_Unit_03_Patterns_Term 1.indd 37 07/02/2023 14:49:59

Patterns are created by combining colours and shapes in different ways.

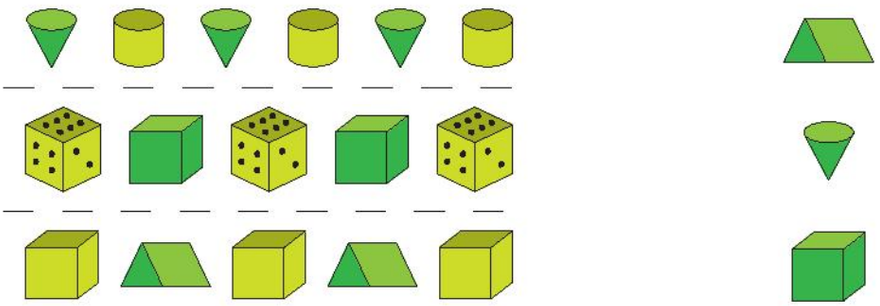


Activity 4

1. Observe the pattern and match the following with next item.



2. Observe the pattern and match the following with the next item.



3rd_Unit_03_Patterns_Term 1.indd 38 07/02/2023 14:50:00

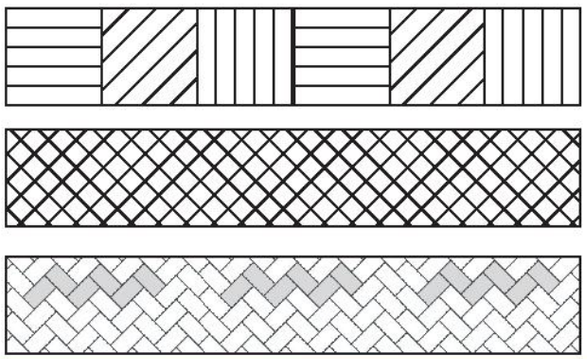
Creating pattern from straight lines

Example: The following images shows some examples of patterns in straight lines.



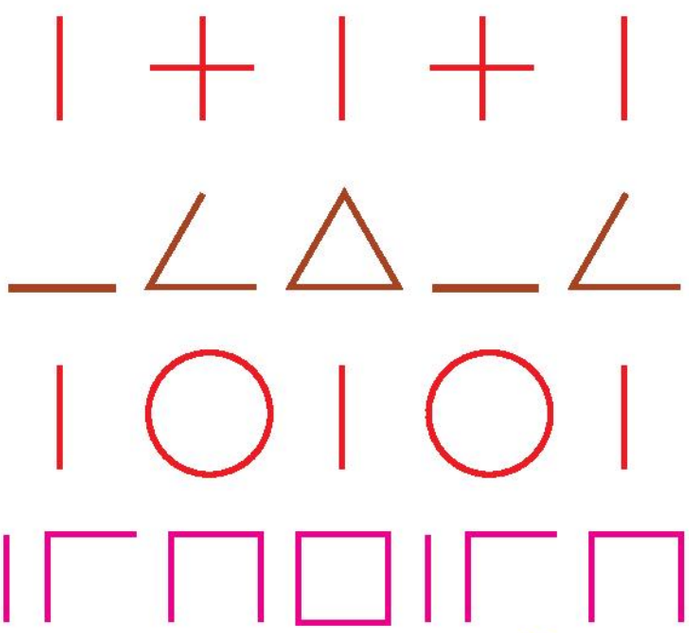
Try these

Observe and extend the line patterns in the given boxes.



Practice

Continue the Straight-line patterns.



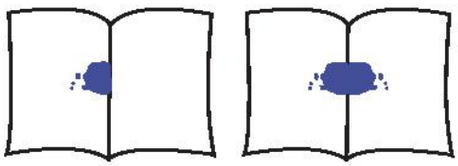
3rd_Unit_03_Patterns_Term 1.indd 39 07/02/2023 14:50:01

3.2 Symmetry

Symmetries in shapes and patterns.

Do yourself

1. Take a piece of paper.
2. Spill few drops of ink on the paper.
3. Now fold the paper and press it.
4. You will get a symmetric figure.



Definition

When a shape or an object is folded into two parts, the two parts coincide exactly then it is called symmetry.

Note: When a mirror is placed on the line of fold then the image will completely match with the other part.

Let us do

1. Take a sheet of paper and fold it.



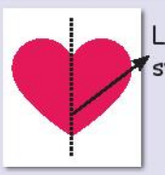
2. Draw any shape at the folded edge of the sheet.



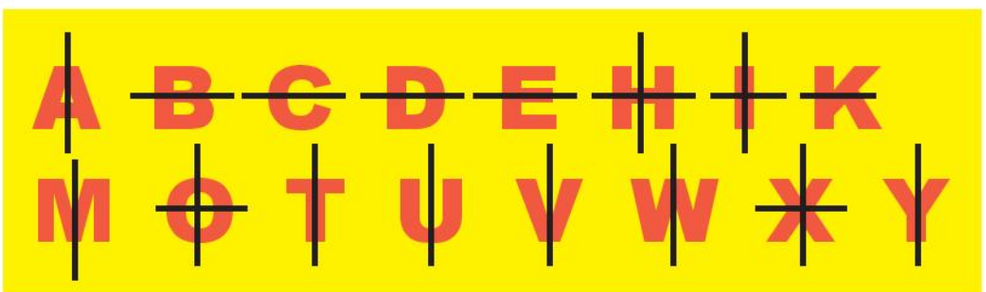
3. Cut the shape



4. Unfold it



Example:



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Line of symmetry

The line which divides the figure into two exact halves is called *the line of symmetry*.

The following letters are non symmetric and does not have line of symmetry.

F G J L N P Q R S Z



Try this

Make the paper cut outs of the shapes shown below with the help of your elders and keep them infront of a mirror and observe the image formed in the mirror. You could see the other half of the image.

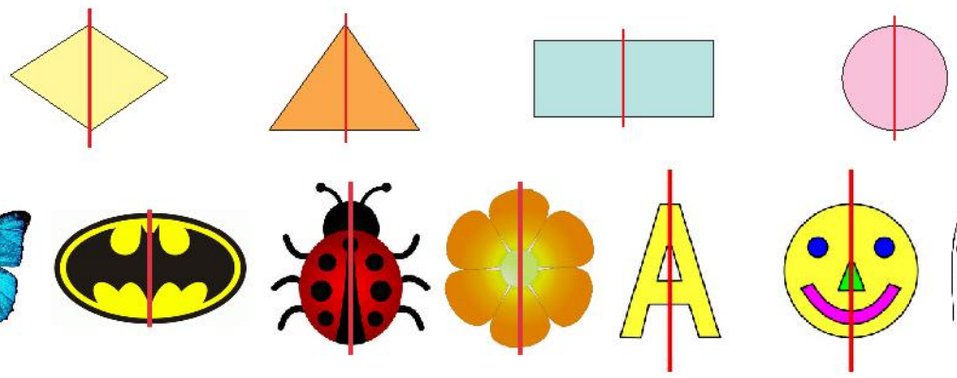


Symmetrical shapes

Definition

If a shape can be folded or divided into half so that the two halves match exactly then the shape is called a symmetrical shape.

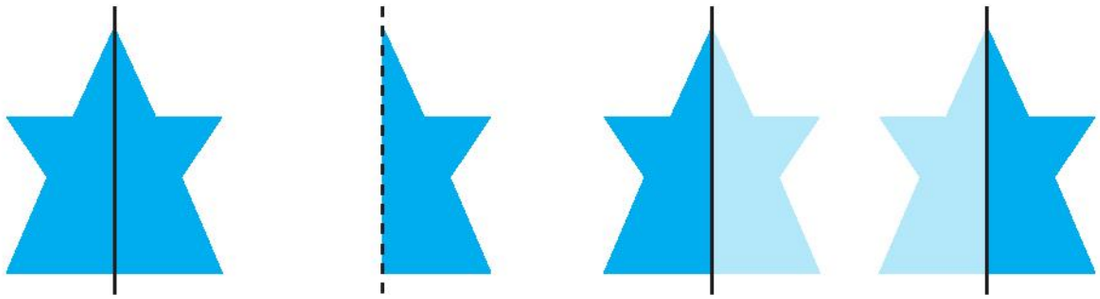
Example: 1



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Example: 2

Line of Symmetry | Folding Line | Mirror Line | Mirror Line



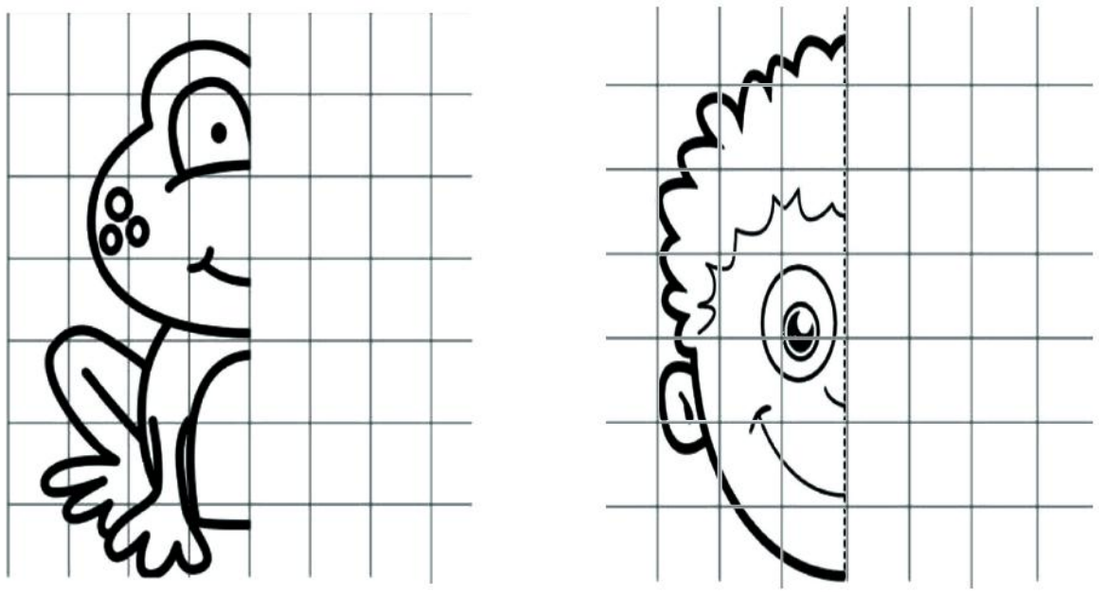
Project:

Collect some symmetrical images from newspapers and magazines and Paste them to make an album.

Teacher's note: Teacher can guide the children to collect the **symmetrical** images in day-today life.

Activity 5

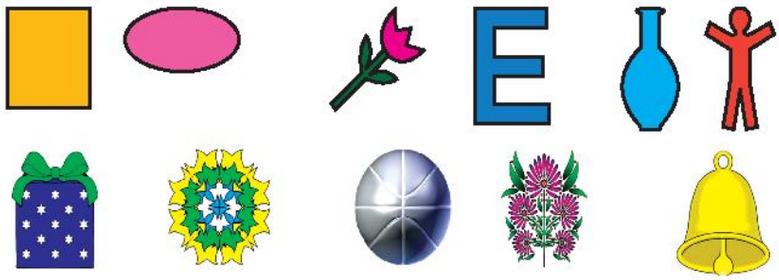
Complete the symmetrical image



3rd_Unit_03_Patterns_Term 1.indd 42 07/02/2023 14:50:06

Activity 6

a. Draw the lines of symmetry and circle the symmetric pictures.

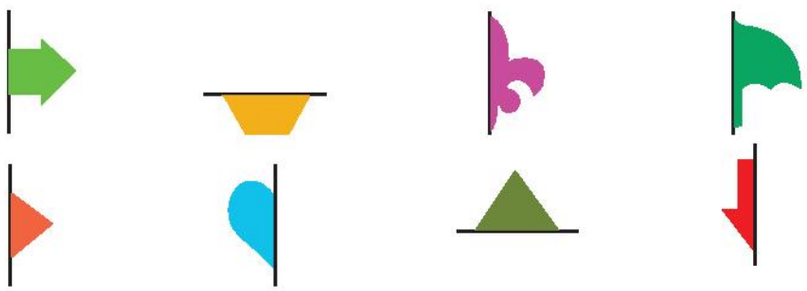


b. Circle the non-symmetrical shapes.



Activity 7

Draw the other part of the given shapes to make it symmetrical.



Activity 8

Draw the line of symmetry for the given alphabets.

A U V Y

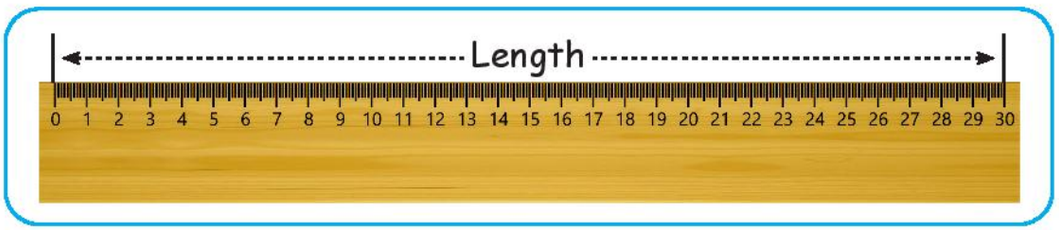
3rd_Unit_03_Patterns_Term 1.indd 43 07/02/2023 14:50:07

UNIT-4

MEASUREMENTS

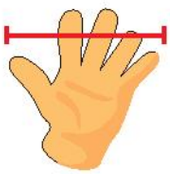


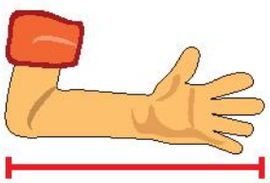
LENGTH



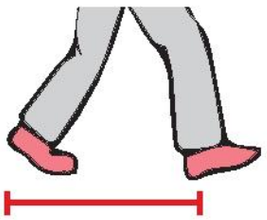
Recall

We measure the length of the objects using non-standard units such as

A hand span 

A cubit 

A foot span 

A pace 

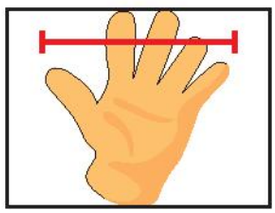
3rd_Unit_04_Measurement_Term 1.indd 44 07/02/2023 14:50:50

4.1 Need for standard Measurement.

Activity 1 Tabulate the length of your class table measured by five of your friends with non-standard units.

Sl. No	Friend's name	Finger width	Hand span	Cubit
1				
2				
3				
4				
5				

Activity 2 Measure the length of ribbon by your hand span.



friend 1 - _____ hand span
friend 2 - _____ hand span
friend 3 - _____ hand span
friend 4 - _____ hand span



Measurements measured using non standard units change from person to person.

Measure length of objects using simple tools.

Activity 3 Group of five students measure the length of the black board by given objects.

Pencil, Eraser, Measurement Scale & Notebook.

Sl. No	Students name	Length of the black board			
		Pencils	Erasers	Scales	Notebooks
1	Kala	10	35	7	14
2					
3					
4					
5					

Activity 4 Students are divided into two groups. They should measure the length of the class room in standard units. Observe that measurements of all the students are same.

3rd_Unit_04_Measurement_Term 1.indd 45 07/02/2023 14:50:51

Measurements of objects does not vary from person to person when measured using the same non-standard measure. But, the length of the blackboard varies when measured using different non-standard measures.



MEASUREMENT OF LENGTH

NON - STANDARD UNITS Measurement varies from person to person	STANDARD UNITS Measuring units are constant
1. Hand span 2. Cubit 3. Pace 4. Foot span.	1.Millimetre 2. Centimetre 3. Metre 4. Kilometre

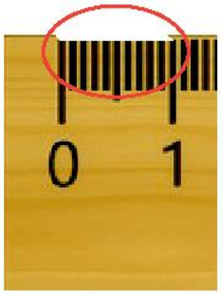
4.2 Millimetre and Centimetre.

Introduction

This is a centimetre scale/ruler. 0 is the starting point. The numbers 1, 2, 3... mentioned below the lines represent the measure of centimetre, that is 1 denotes 1 centimetre 2 denotes 2 centimetre and so on. It is denoted by cm.

Each centimetre is divided into 10 equal parts by the smaller lines. Each of these parts represent 1 millimetre. It is denoted by mm.





From the picture,

1 centimetre equal to 10 parts.

So 10 millimetre = 1 centimetre.

Short form

Millimetre	-	mm
Centimetre	-	cm
Metre	-	m
Kilometre	-	km

How many millimetres are there between 0 and 1?

How many millimetres are there between 1 and 2?

How many millimetres are there in 1 centimetre?

Teacher's note: Help the children to find length of the objects by using standard units.

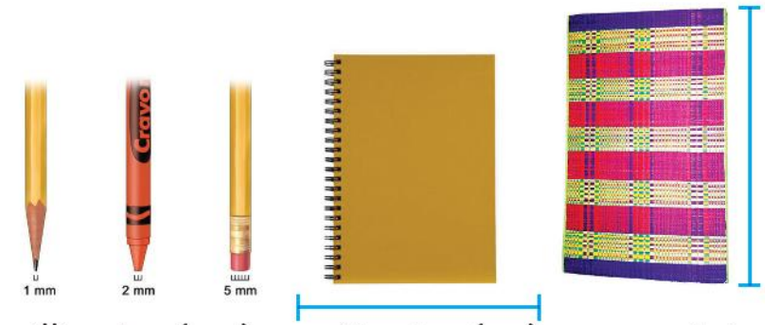
3rd_Unit_04_Measurement_Term 1.indd 46 07/02/2023 14:50:51

Let us know

100 centimetre = 1 metre
1000 metre = 1 Kilometre

Millimetre is the smallest unit of length.
Kilometre is the biggest unit of length.

Example:



millimetre (mm) centimetre (cm) metre (m)

Activity 5





Measure the length of ribbon by tape roll.

Student 1 ( ) cm Student 2 ( ) cm

Student 3 ( ) cm Student 4 ( ) cm

Length of the ribbon do not change from person to person when measured using standard units.

Practice

Measure the length of following objects by centimetre scale and write it in the boxes given below.



( ) cm ( ) cm ( ) cm ( ) cm ( ) cm

Teacher's note: Guide the children to measure the objects properly.

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4.3 Measurement of length using ruler.

Objects				
Length in centimetre	30 cm	☐ cm	☐ cm	☐ cm

4.4 Centimetre and metre.

Try this

a. Write the appropriate (metre or centimetre) units in the blank space.

i. My pencil is 6 _____ long. ii. My hairpin is 8 _____ long.

iii. This tree is 3 _____ high. iv. Height of coconut tree is 15_____.

b. Meena has a ribbon of 50 cm length and Reena has a ribbon of 90 cm length.

Whose ribbon is the longer? ☐

Activity 6

Measure the length of following objects in your class room using metre tape and fill in the boxes.



☐ metre



☐ metre



☐ metre



☐ metre

Understand the order of magnitude between centimetre, metre and kilometre as units.

Try This

Put '<' and '>' in the boxes.

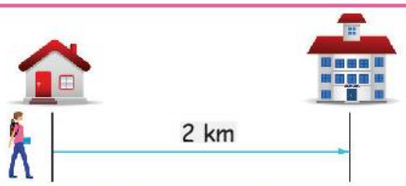
a. Centimetre ☐ Metre

b. Metre ☐ Kilometre

c. Kilometre ☐ Centimetre

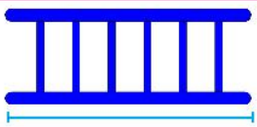
3rd_Unit_04_Measurement_Term 1.indd 48 07/02/2023 14:50:52

Practice Write the appropriate units to measure the following.

4.5 Comparison of estimation with actual measurement

Activity 7 Estimate the length of the following objects and verify the actual length using scale/ measuring tape.

Sl. No	Name of the object	Estimated length	Actual length
1			
2			
3			
4			
5			
6			

3rd_Unit_04_Measurement_Term 1.indd 49 07/02/2023 14:50:53

Practice

1. Circle the odd one.

1. mm 2. cm 3. m 4. Cubit

2. Match the following.

10 milimetres	1 kilometre
100 centimetres	1 centimetre
1000 metres	1 metre

3. Write non standard Units.

1. Hand span 2. _____
3. _____ 4. _____
5. _____

4. Write standard Unit.

1. millimetre 2. _____
3. _____ 4. _____

5. Write in short form.

millimetre : _____ centimetre : _____

metre : _____ kilometre : _____

D73BE

6. Write the given units in order.

mm metre cm km

Ascending order _____, _____, _____, _____

Descending order _____, _____, _____, _____

3rd_Unit_04_Measurement_Term 1.indd 50 07/02/2023 14:50:54

UNIT-5

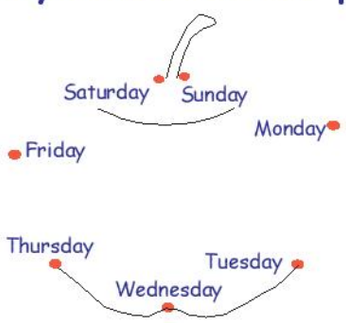
TIME



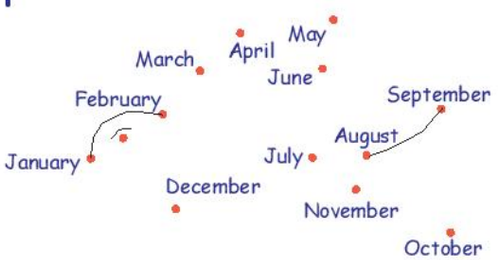
5.1 Calender

Let us recall the months of the year.

a. Join the dots in the order of the days and colour the picture.



b. Join the dots in the order of the months and colour the picture.



c. Fill in the blanks.

1. A year has _____ days.
2. There are _____ days in a week.
3. Twelve months make _____ year.
4. A month has_____ days.
5. First month of a year is _____.
6. First day of a week is_____.

Let us know

1 Week	= 7 Days
1 Month	= 30 Days
1 Year	= 12 Months
1 Year	= 365 Days
1 Leap year	= 366 Days

Leap year

A leap year has 366 days. There are 29 days in February in a leap year. It occurs once in every 4 years. The year 2016 was a leap year. 2020 is a leap year. 2024 will be the next leap year.

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5.2 Read a particular day and date

Mahatma Gandhi's birth date is the 2nd of October 1869.

Write the date 02. 10. 1869 as it is written.

Date	Month	Year
2	10	1869

1. What is today's date?
2. What is your birthday date?



Try this Observe the calendar and circle the given dates.

JANUARY 2018

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY 2018

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

1. Round the date 4 January 2018?
2. Round the date 15 Januray 2018?
3. Round the date 22 February 2018?
4. Round the date 31 January 2018?
5. Round the date 28 February 2018?
6. Round the date 5/02/2018?
7. Round the date 26/01/2018?
8. Round the Sundays in January 2018?



Activity 1 Find and write the date of birth and age of students in your class room with the help of your teacher.

Name of the students					
Date of Birth					
Age					

Ask the date of birth of the members in your family and complete the table with the help of your teacher.

Members	Date of birth	Age	25th birthday	40th birthday
Father				
Mother				
Brother				
Sister				

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Practice

1. Observe the calendar of 2018 and fill in the boxes.

Calendar 2018



1. Teachers Day is on _____
2. Independence Day is on _____
3. Republic Day is on _____
4. Children's Day is on _____

2. Match the following.

November 15, 2018	26.04.2018
June16, 2018	10.12.2017
April26, 2018	15.11.2018
December10, 2017	26.05.2017
May26, 2017	16.06.2018

3. Look at the calendar and fill in the blanks.

1. Number of days in October 2018 is ____
2. The number of Sundays ____
3. The first Saturday is on ____
4. Last day of the month is ____
5. The tenth day of this month is ____
6. The third Wednesday comes on ____

October 2018						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

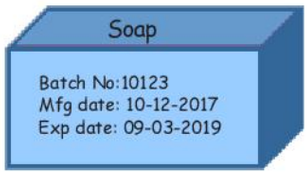
3rd_Unit_05_Time_Term 1.indd 53 07/02/2023 14:53:29

5.3 Manufacture and expiry date

Date of manufacture means the date on which a product is manufactured. Date of expiry means the date upto which a product can be used. We must avoid using the products after the expiry date.



Manufacture date: 09-07-2015
Expiry date: 08-07-2018



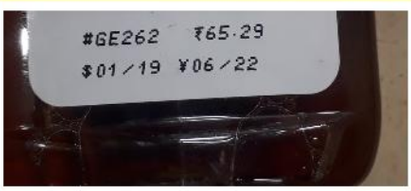
Manufacture date: 10-12-2017
Expiry date: 09-03-2019



Manufacture date: 13-11-2017
Expiry date: 04-04-2019

Practice

1. Write the manufacture date and expiry date of the following items.

S.No	Items	Manufacture month or date	Expiry month or date
1			
2			
3			
4			

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2. **Calculate how many months / days between manufacture and expiry dates.**

S.No	Name of Food products	Manufacture date	Expiry date	Difference
1	Honey	July 2017	Sep 2019	
2	Cashew nut	Dec 2005	Feb 2008	
3	Pickle	Feb 2018	Apirl 2018	
4	Coffee powder	Aug 2008	Nov 2008	
5	Badam milk	Feb 2019	March 2019	



Activity 2

Fill in the date of manufacture and date of expiry of any 5 food products you use in daily life.

S.No	Name of Food products	Manufacture date	Expiry date
1			
2			
3			
4			
5			



Practice

1. Find how many days are there in first 5 months of the leap year?
2. Find the next five leap years.
3. Circle the ordinary years and box the leap years.

2015 2016 2017 2018 2019 2020 2021
2022 2023 2024 2025 2026 2027 2028
2029 2030 2031 2032 2033 2034 2035

WGTRC

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UNIT-6

2 Information Processing



6.1 Systematic Listing

Listing all possible choices

Kavin has taken 2 trousers and 3 shirts with him to wear in a picnic. List down all the possible choices that he can wear them.

Example:





picture 1



picture 2

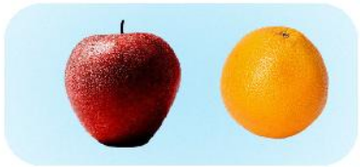


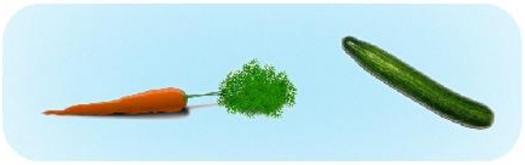
picture 3

There are two possible ways of dressing using one half sleved shirt and two trousers as shown in picture 1. Similarly we shall pair remaining two full sleved shirts with the trouser in four ways as shown in picture 2 and picture 3. Hence there are six possible ways of pairing two trousers with three shirts.

3rd_Unit_06_Information_Term 1.indd 56 07/02/2023 14:54:14

Kaviya likes to eat one vegetable and one fruit in a day. Apples and oranges are her choices among fruits and carrots and cucumbers are her choices among vegetables. Complete the given table by filling the ways she can eat one fruit with one vegetable.



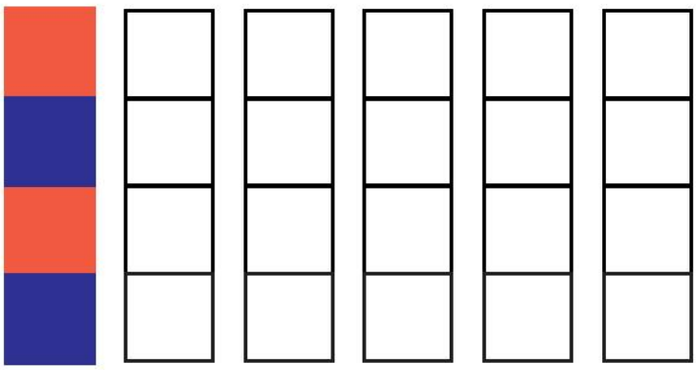


Fruit				
Vegetable				

Activity 1

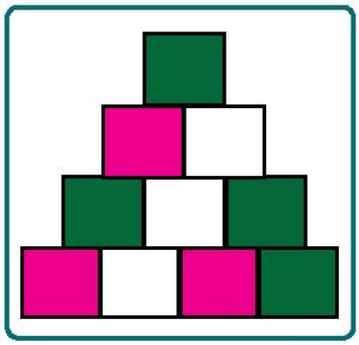
Find all possible ways of colouring the given blocks with blue and red.

One is done for you.



Activity 2

Fill the white space in the given blocks with alternate colours and answer the following questions based on it.



i. Total number of blocks ◯

ii. Number of rose block ◯

iii. Number of ■ blocks ◯

iv. Number of ■ blocks in 2 and 4 row ◯

v. How many ■ more than ■ ◯

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Example:

List down all possible ways of forming three digit numbers by using the digits 4,5 and 7 once.

457 475 574 547 754 745



Practice

1. List down all possible ways of forming three digit numbers by using the given digits only once.

i. 9,6,8 ii. 3,2,0 iii. 1, 5, 4

i. 986 968 698 689 896 869

ii.

iii.

2. Find all possible ways of combining the three letters a,e,t using each of them once.

Example:

List all possible 3 lettered words 4 lettered words and 5 lettered words that start with alphabet 'R'.

RIGHT RED RING ROSE RAT

ROAD RIVER RUPEE RUN

Look at the above words and answer the questions.

i. Number of 4 lettered words are _____.

ii. There are _____ 3 lettered words.

iii. There are _____ 5 lettered words.

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Activity 3

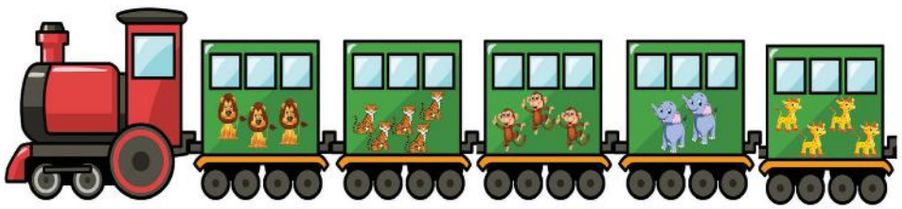
1. List down all possible meaningful 3 lettered and 4 lettered words starting with the alphabet 'A'.
2. List the names of the animals with 4 letters.

6.2 Collection and Represention of Data

Pictorial Representation

Symbols and pictures can be used to represent data.This is known as **Pictorial Representation.** This helps us to study and understand data easily.

Example: Look at the below picture and fill the required data.



i. How many  are there? (3)

ii. How many  are there? (3)

iii. Circle the animal which is more in count.



iv. Circle the animal which is less in count.



v. What is the difference between highest and lowest count? (3)

vi. Total number of animals in the zoo train is (17).

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Example:

The following picture represents the data on fruits sold in a shop.

Apple	
Orange	
Banana	
Pineapple	

Look at the above picture and fill the required data.

i. Name the fruit which was sold more.

ii. Name the fruit which is sold less.

iii. Find the number of apples sold.

iv. Write the number of bananas sold?

v. What is the difference in the number of pineapples and oranges sold ?

Practice

1. Collect the data from 40 of your friends about their favourite food and represent it in Picture.

Food	Picture	Total
Idly		
Dosa		
Poori		
Chappathi		

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2. The following picture represents the number of chocolates sold at a shop in a week.

 = 10 Chocolates

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Answer the following questions from the data given in the above table.

i. The total number of chocolates sold on Thursday is ( )

ii. The sale was maximum on ( )

iii. The sale was minimum on ( )

iv. Sales were equal on ( ) and ( )

v. The total number of chocolates sold in six days are ( )

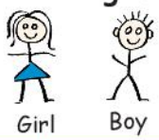
3. Collect the data from 40 of your friends about their mode of travel to school and represent it in the picture.

Mode of travel	Picture	Total
By walk		
By bicycle		
By motorcycle		
By public transport		
By school vehicle		

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6.3 Drawing Conclusion from the Represented Data

The graph below shows the number of children in a school studying in classes 1-4 of a school. The number of girls studying in classes 1-4 of a school are 14, 10, 16 and 13 respectively. Draw the graph discussing with your teacher for number of boys studying in classes 1-4.



Class		Number of students	Total
I standard	Girls		14
	Boys		
II standard	Girls		10
	Boys		
III standard	Girls		16
	Boys		
IV standard	Girls		13
	Boys		

After completing the pictorial representation answer the following questions.

i. The number of girls in class 2 is _____.

ii. The number of boys in class 3 is _____.

iii. The total number of students in class 4 is _____.

iv. The total number of girls from class 1to 4 is _____.

v. The total number of boys from class 1 to 4 is _____.

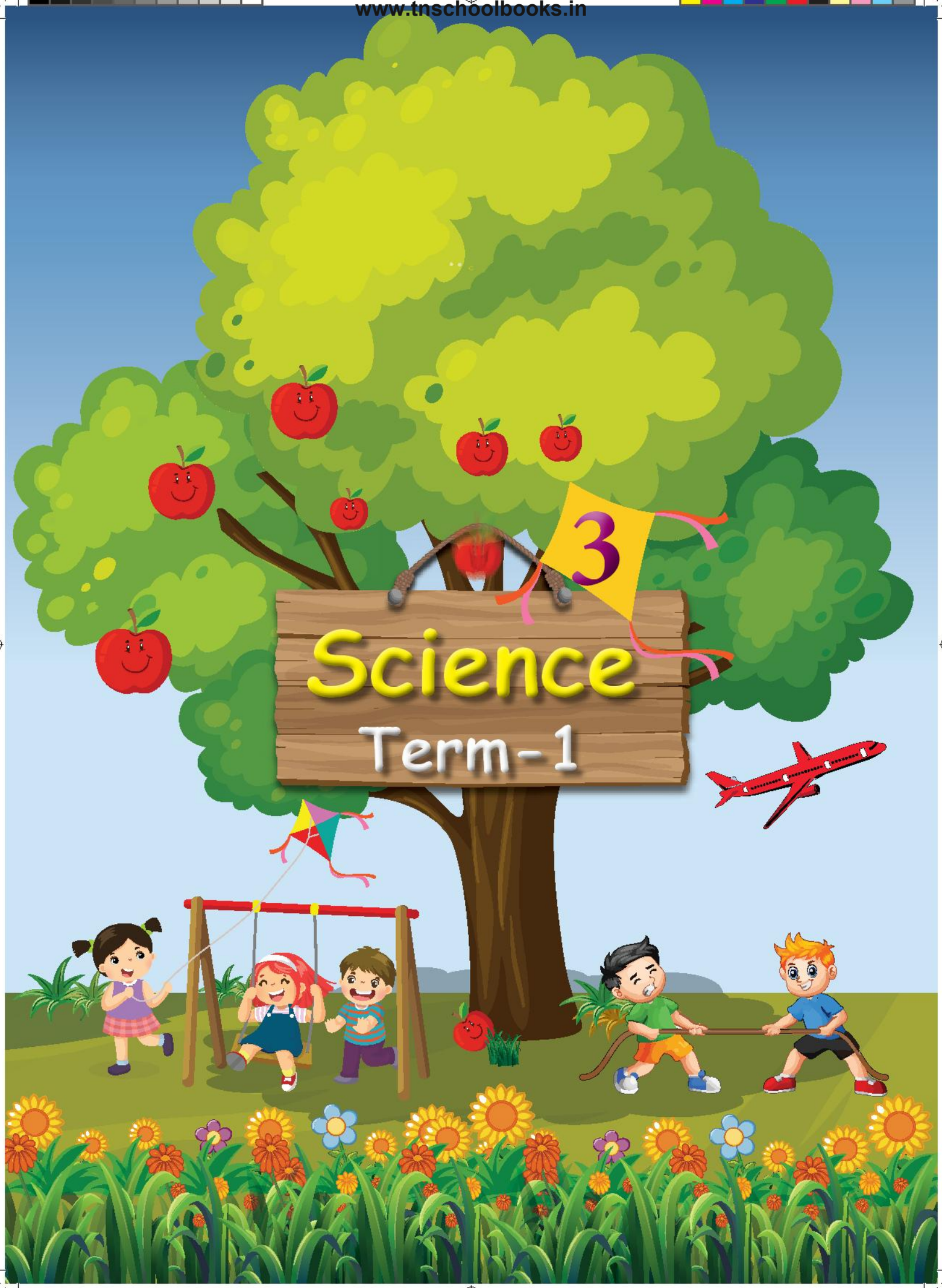
vi. The class which has more strength is _____.

WDOJI

Teacher's note: Help the children to collect the number of boys in each class and complete the pictorial representation.

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2	States of Matter	82	June -July
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4	Science in Everyday Life	102	Aug - Sep

5YMT4

E-Book

HVJM6

Evaluation

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Unit 1

My Body

Learning Objectives

After learning this lesson, students will be able to

- know the benefits of hand washing.
- understand self-hygiene.
- develop the habit of using toilets and avoiding open defecation.
- know the precautions to protect the sense organs.
- recognize the differences and similarities in people's appearance and abilities.
- understand good touch and bad touch.
- grasp the importance of physical exercises.

B5NDZ

Tick (✓) the items used for personal hygiene.



3rd Science Unit 1 (My Body).indd 65 07/02/2023 13:12:08

I. Cleanliness

Mithra is watching TV with her parents. An advertisement in the TV shows a toilet with germs. Mithra asks her dad what they are. He explains to her about germs.

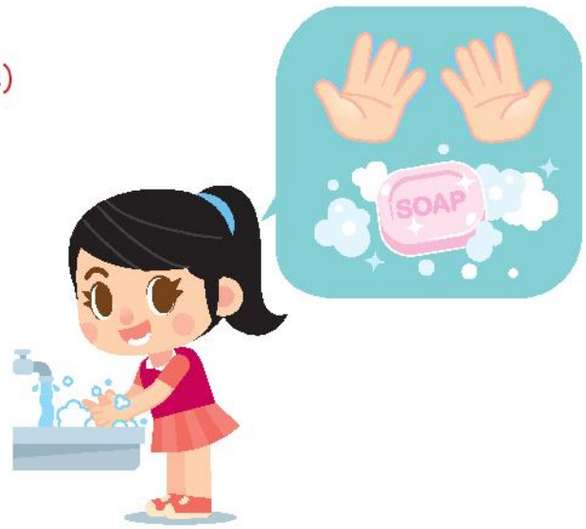
Do you know about germs?

Germs are microorganisms that affect our body. They are found in all the places. If we do not maintain cleanliness, the germs will infect us and cause many diseases to us.

1.Hand Washing

Dialogue between Shruthi and her mother.

(After playing outside, Shruthi returns home)



Shruthi: Mom, I am so hungry. Give me something to eat.

Mother: Shruthi, go and wash your hands.

Shruthi: No mom, I want to eat first. Then I shall wash my hands.

Mother: No, you must wash your hands.

Shruthi: Mom, is it necessary to wash hands before eating?

Mother: Yes, look at your hands. Is it clean or dirty?



Shruthi: My hands are so dirty, mom.

Mother: Where does the dirt stick in your hands?

Shruthi: Under the nails, in the ridges...

Mother: Yes, these are the places where the germs are hiding.

Shruthi: Is it so?

Mother: Yes. It is important to wash your hands. It is a simple habit that keeps you healthy.

(Mom starts explaining the hand washing technique and its importance)

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Let us Do



Steps of Hand Washing

- Wet your hands.
- Apply enough soap.
- Rub the palms.
- Rub the back of each hand together.
- Rub both hands holding all fingers (interlocked).
- Rub the back of the fingers.
- Rub the tip of the fingers.
- Rub the thumbs and the ends of the wrists.
- Rinse both hands properly with enough water.









Benefits of Hand Washing

- Kills or removes germs.
- Lowers the risk of diseases like diarrhoea.
- Prevents eye infections.
- Reduces the risk of respiratory infections.









Let us Draw - Germy Hand

1. Trace your hand in a white sheet using pencil.
2. Draw the pictures of small germs in the hand.
3. Colour the germs.

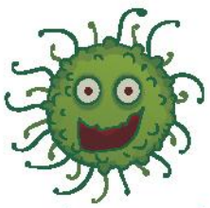


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Let us Write

Complete the Worksheet

Name : _____



Germs

Do germs make people sick?

Yes No

Can you see germs?

Yes No

Where are the germs found?

1. _____

2. _____

What can I do to avoid the spreading of germs?

1. _____

2. _____

Think Zone

Preethi often bites her nails. Is it a good habit? Give reason.

_____

_____

Do you know?

Global Hand Washing Day is observed on October 15.

Think and Discuss

Arun usually eats food or snacks without washing hands properly.

Is it correct? Give reason.

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2. Using Toilets

Nearly one billion people in the world have no access to toilet at all and they are forced to do open defecation. Open defecation spreads diseases such as cholera and diarrhoea. Groundwater is polluted by toilets and it also causes diseases. Children also get affected by intestinal worms which causes anaemia. So, it is necessary to use toilets.



Do you know?

World Toilet Day is observed on November 19.

Why is it important to have a toilet?

Having a toilet

- prevents diseases like cholera.
- offers privacy.
- is convenient.
- is safe.

Effects of open defecation

- Water borne diseases
- Diseases caused by insect carrier
- Pollution

What should we do to wash out the intestinal worms?

We should use toilet and avoid open defecation. We should wash our hands after using the toilet. These will help us to have a healthy life.



Do you know?

National De-worming Day is observed on February 10.

More to Know

'Sulabh' International Museum of Toilets is in Delhi, India. It exhibits different toilet models from 50 countries across the world – spanning from 3000 BC till the 20th century.



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3. Bathing



Discuss with group

- ✓ Why do we take bath?
- ✓ Why is it important to take bath daily?
- ✓ Why do we use soap to clean our body?

Importance of bathing

- ➢ Cleanses the body.
- ➢ Removes dirt and odour.
- ➢ Protects oneself from infection.
- ➢ Improves blood circulation.

Do you know?

The fruits of Soapberry tree are Saponin-rich and so they are used as soap substitute.



Do you know?

World Health Day is observed on April 7.

Safety measures in Bathroom

- ♦ Do not play with water or run around in the bathroom. You may get hurt.
- ♦ Do not touch sharp objects such as blades, razors and scissors kept in the bathroom.
- ♦ Use hot water under the supervision of an adult only.
- ♦ Do not leave soap bar on the floor. Someone may slip due to it.
- ♦ Do not leave the bathroom floor wet. Dry the floor using a wiper before you leave.
- ♦ Do not touch electric switches with wet hands. You may get hurt with an electric shock.

Put a tick (✓) for correct action and cross (x) for wrong action.

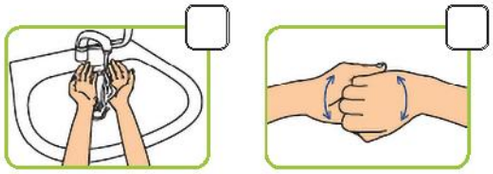


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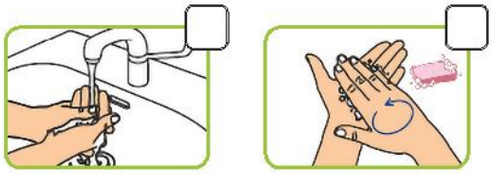
Let us Answer

Read the statements given below. Identify whether it is right(✓) or wrong(x) and mark within the box.

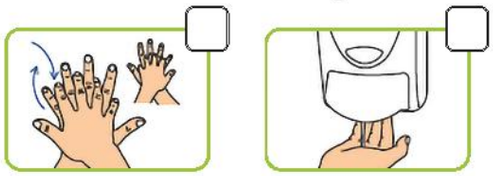
Wet your hands before washing.



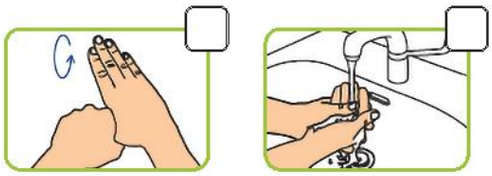
Apply soap on hands.



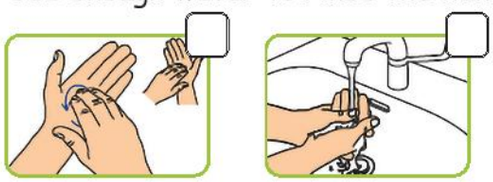
Rub the back of the fingers.



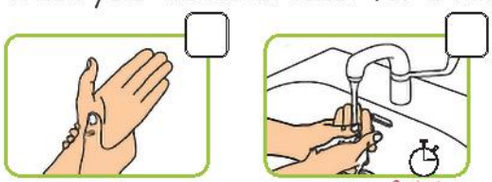
Rub the thumb.



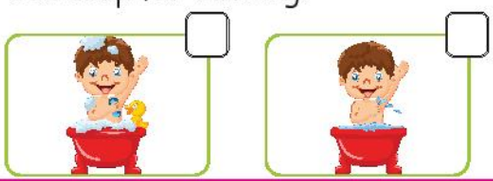
Use enough water to rinse the hands.



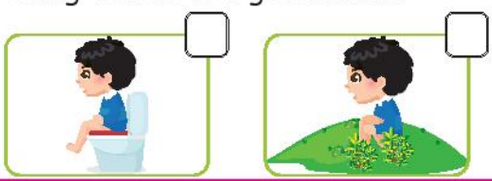
Wash your hands at least for 2 minutes.



Use soap for bathing.

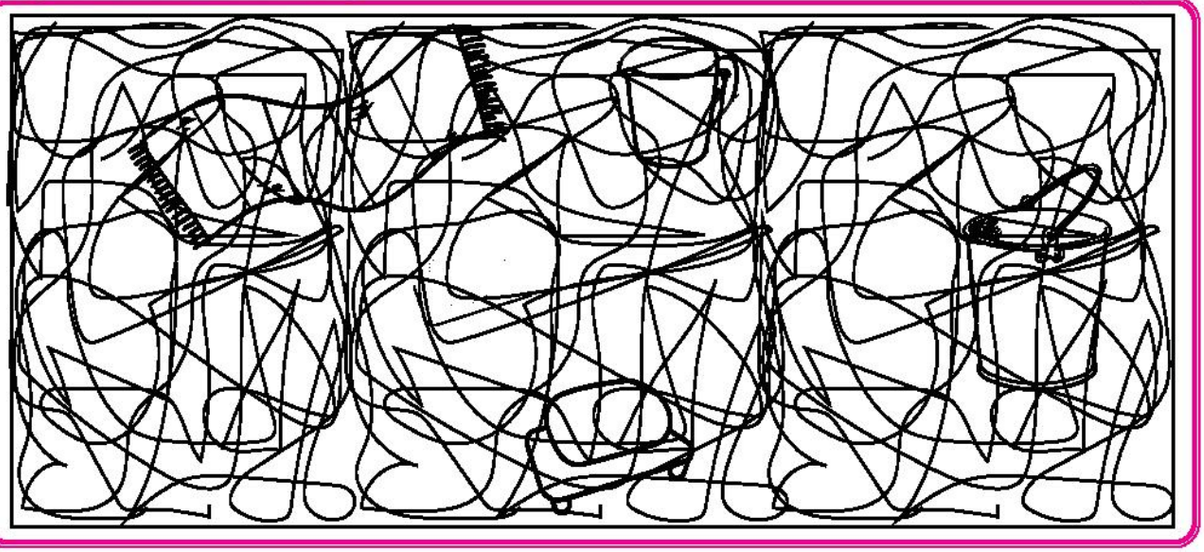


Using toilets is a good habit.



Let us Find

Varun is in the bathroom. He is searching the things to take bath. Help him to find the things by colouring them.



3rd Science Unit 1 (My Body).indd 71 07/02/2023 13:12:20

II. Protecting Sense Organs

Sense organs help us to observe and understand the world around us. There are five main ways through which we can do this. They are sight (with our eyes), touch (with our skin), smell (with our nose), taste (with our tongue) and hearing (with our ears).

The ways by which we can take care of our sense organs are given below.

By nature, all the sense organs have some ways to protect themselves. For example, the eyelids and lashes protect the eyes from dust and other foreign particles.

How should we take care of our sense organs?



Think Zone

Anu plays with her baby brother. As he cries, she gives him a pencil. On seeing this, Anu's mom was shocked. She quickly takes the pencil back. Do you know, why?

EYES

Do's	Don'ts
❖ Read with proper light.	❖ Don't read in too dim or too bright light.
❖ Watch television from a minimum distance of 6 feet.	❖ Don't play video games or watch TV for a long time.
❖ If you feel your eyes are itchy, wash them with clean and cold water.	❖ Don't rub your eyes with your fist.

If you find it difficult to read the classroom board from your place, tell your teacher/parents and consult a doctor. You must follow the suggestions of an **Ophthalmologist** or eye doctor.



Do you know?

A condition known as digital eye strain is common among people working at computers all day. This condition leads to dry eyes, eye strain, blurred vision and headache.



3rd Science Unit 1 (My Body).indd 72 07/02/2023 13:12:22

EARS



- Avoid loud noise.
- Do not listen to music at higher volume while using earphones or headphones.
- Do not clean ears with ear buds.
- Dry your ears after taking bath.
- Cover your ears while swimming and bathing.

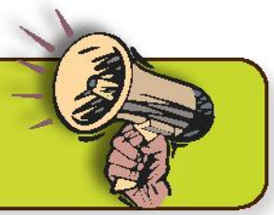


- Use ear plugs or ear muffs (when you are exposed to loud sound).
- Consult a doctor if you have pain in ear.

Hearing loss can not be prevented always. But hearing loss due to exposure to loud noises can be avoided.



Noise levels are measured in decibels (dB).
Any sound over 85dB can be harmful to us.



NOSE



- Do not clean your nose by inserting any object into it.
- If the nose is blocked due to cold it is better to use steam to clear it.
- Do not pick your nose.

TONGUE



- We should clean our tongue daily with tongue cleaner while brushing our teeth.
- A dirty tongue causes bad breath and disease. Hence, tongue should be cleaned regularly.

SKIN



- Always use a mild soap.
- Keep your skin dry and clean.
- Dry your skin by rubbing gently with a clean cloth.
- Consult a doctor when you have itching, skin injury or infection.

3rd Science Unit 1 (My Body).indd 73 07/02/2023 13:12:25

Let us Do

Read the given statements carefully. Write 'T' if it is True and 'F' if it is False.

1. Avoid playing video games or watching TV for a long time.
2. Avoid loud noise.
3. Do not clean your nose by inserting any object into it.
4. A dirty tongue causes bad breath and diseases.
5. Dry your skin by rubbing gently with a dirty cloth.

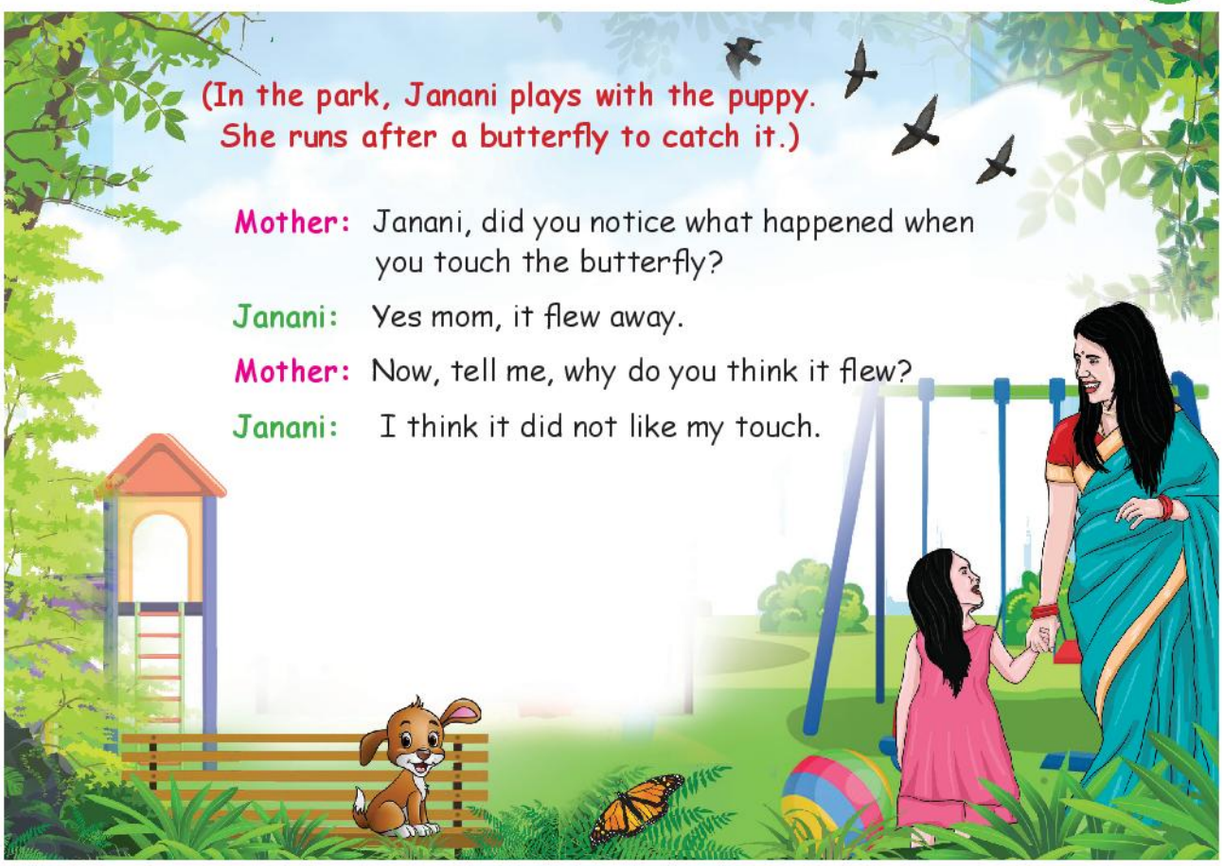
Let us Practice

Make a figure '8' with your eyes

This is a good exercise to control the physical movement of your eyes.

- Draw a large figure of '8' on the floor, about 10 feet in front of you.
- Trace the figure '8' with your eyes, slowly, without shaking head.
- Do it clockwise for few minutes and anti-clockwise for few minutes.

1.3. Good Touch, Bad Touch and Don't Touch



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Mother: Maybe, it did not. But, it wanted to be safe.
Now, I am going to tell you three rules to keep yourself safe.

Janani: Okay, mom.

Mother: There are body parts that you and others can see and touch like our hands.

But, there are also some body parts that no one should see or touch like our chest, between our legs and our bottom. These parts are called private parts. What are they called?

Janani: _____.

Mother: So now, let me tell you the rule number 1. It is never right for anyone to look at, touch or talk about your private parts. And it is never right for someone older than you to ask you to look, touch or talk about their private parts.

Janani: But mom, don't you give me bath daily?

Mother: Very good question! Who else knows that I give you a bath?

Janani: Dad, Grandpa, Grandma and Brother know that you give me bath.

Mother: Correct, when we are small our mom or dad might touch us to help us to be clean. It is never a secret and it is okay to tell someone about it.

Janani: I got it mom. It is never right for anyone to _____, _____ or _____ about my private parts. But, it is never a _____.

Mother: Very good! Some touches are good or safe, like when we shake hands. But, some touches are bad or unsafe, like when we hit someone. Can we hit someone?

Janani: _____.

3rd Science Unit 1 (My Body).indd 75 07/02/2023 13:12:27

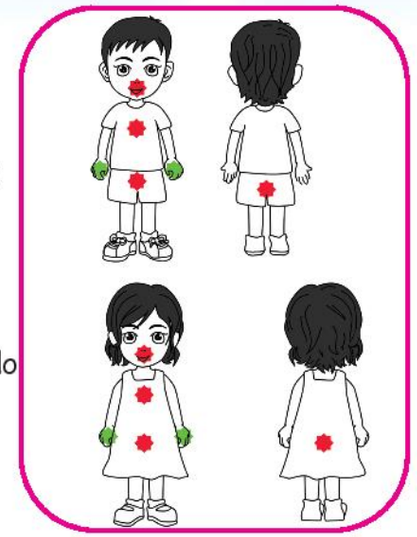
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Mother: Bad touches might make you feel sad, angry, scared, or confused. If you do not like any touch or if it makes you sad, angry or scared, tell them to STOP! Scream "STOP!" and run away. This is rule number 2.



Janani: Okay mom. If I do not like any touch, I scream _____ and _____.

Mother: Very good! Now let me tell you the rule number 3. Tell an adult you trust, about the bad touch. Keep telling until you get the help you need.



Janani: I should _____ adults I trust till I get _____.

Mother: Janani, remember, no matter who blames you, it is never your fault.

Janani: But mom, would people I know also do 'bad touch'?

Mother: Anyone would do. So it is important that you keep all the three rules in mind even if you know the person. Can you say the rules?

SAFE CIRCLE MEMBERS





If someone abuses you or hurts you, you can call 1098 and get help.



3rd Science Unit 1 (My Body).indd 76 07/02/2023 13:12:29

Let us Discuss

1. You are playing in the park. Someone gives you eatable things / toys. What will you do?
2. If someone touches you, you feel uncomfortable. What will you do immediately? To whom you will inform this?

1.4. Physical or Sensory challenge

Ramu went for shopping with his father. On the way they saw a visually challenged person who tries to cross the road. Ramu's father went to him and asked, "May I help you sir?", and the differently abled person replied, "Yes, I want to cross the road".

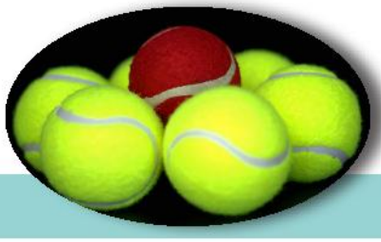
Ramu's father joyfully helped him to cross the road. By seeing this, Ramu felt proud of his father, and he also wanted to help the needy. So, Ramu asked his father to teach him how to help differently abled persons.



1.4.1. Differently-abled persons

Think Zone

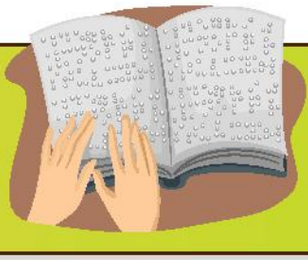
What do you think about this picture?



Not everybody can use all five senses. Some lack the ability to use any one or more of them, such people are called 'Differently-abled'.

Do you know?

Braille is a reading and writing method for visually challenged person. It has a raised pattern that can be read with the fingers.



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1.4.2 Let us know how to help them

Helping people is very honourable, and there are plenty of ways by which we can help differently-abled people.

- Ask first if they need any help from you and follow their lead.
- Speak clearly and listen to their words well.
- Use direct words.
- Never tease them by calling with specific names.
- Be aware of their personal aids, do not cause any damage to the aids.



Your simple acts can be helpful to them.

* Opening doors for the disabled.
* Making way for them.
* Bring them to cross the road.
* Treat them as normal people.

By doing these you can exhibit that you want to help the differently-abled.

Do you know?

We do not use the word 'handicapped or disabled'. We use 'differently-abled'

Match

1. Orthopedically challenged -
2. Visually challenged -
3. Hearing challenged -






Let Us Discuss

Gopi is travelling in a bus along with his parents. The bus stops in a particular stop and a differently- abled person gets into the bus. If you are Gopi, what will you do? Discuss with your friends.

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1.5. Importance of Physical Exercise



Parents - teachers meet is going on in Sheela's school. As her parents are out of the town, her grandfather attends the meeting. He is a retired army person and even at the age of 90, he does all his work by himself. Everyone in the meeting wonders "What is the secret behind his good health?" and they asked him for the secret. Grandpa replied that he avoids junk food and takes healthy and fresh food. He does physical exercises like walking, running, jogging, and yoga. He advises all parents and children to do exercises regularly.



J51C8

Physical Exercise



Protects us from diseases.

Balances our body weight.

Strengthens our muscles and bones.

Improves digestion.

Improves sleep quality.

Increases our energy level.

Improves skin health.

Boosts brain functions and memory.

3rd Science Unit 1 (My Body).indd 79 07/02/2023 13:12:33

Find and circle the words related to fitness.

(SLEEP, ENERGY, HEALTHY, RUN, JUMP, PLAY, YOGA)

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

EVALUATION

3FQCN

I. Fill in the blanks.

1. We should wash our hands _____ (before / after) playing out.
2. Intestinal worms cause _____ (anaemia / cold).
3. Eating _____ (fruits / packed snacks) is good for health.
4. _____ (Eating junk food / Doing exercises) improves our brain functions.
5. If someone's touch hurts you, then it is a _____ (good touch / bad touch).
6. _____ (Handicapped /Differently-abled) is the word used to refer to the disabled persons.

II. Say 'TRUE' or 'FALSE'.

1. Use soap to wash your hands.
2. Open defecation causes cholera.
3. Bathing reduces blood circulation.
4. Show pity on physically challenged people.
5. Always use ear buds to clean your ears.

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III. Answer the following questions in a few words.

1. What are the effects of open defecation?
2. Write the benefits of bathing.
3. List out the types of touches.
4. Who are the persons in your safe circle?
5. Name the sensory organs of our body.

IV. Arrange in correct order. (First and last steps are in correct sequence)

1. Wet your hands and apply enough soap.
2. Rub the tips of your finger.
3. Rub both hands by interlocking your fingers.
4. Rub the back of each hand.
5. Rub the palm together.
6. Rub the back of each fingers.
7. Rub the thumb and end of your wrist and rinse both hand with water.

V. Answer the following questions.

1. When do we wash our hands?
2. What will you do when somebody who are not in your 'safe circle' touches you?
3. How can we protect our skin?
4. How do we get intestinal worms?
5. How do you help differently-abled people?

VI. Project work.

Collect proverbs related to self-hygiene, health and sanitation.

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Unit 2

States of Matter

Learning Objectives

After learning this lesson, students will be able to

- know the matter surrounding us.
- differentiate between solids, liquids and gases.
- conduct simple experiments.
- observe the properties of matter.
- describe the nature of the material.

3L7C8

Matter

Teacher : Leela, look at the picture and list out the things you see in it.

Leela : Yes madam. Sun, river, boat, house, tree, car, birds, ...

Teacher : Very good. There are many things in this picture. Some of them are natural and some of them are man-made.



You can see a number of things around you. Everything you can see and touch is a matter. Anything that occupies space and has mass is called matter.

Let us Do

List out some of the matter around you.

1. _____ 2. _____ 3. _____ 4. _____

3rd Science Unit 2 (States of Matter).indd 82 07/02/2023 13:15:40



More to Know

What is mass?

Mass is a measure of how much matter is in an object.

- The air we breathe, the food we take, and the water we drink all have matter in them.

Do you know that even you are a matter?

The space occupied by an object is its volume.

2.1 States and Properties of Matter

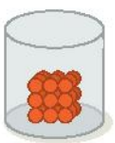
GHBZX

Matter can exist as solid, liquid or gas.

Solid



- rigid
- fixed shape
- fixed volume



Liquid



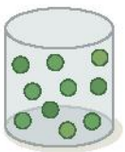
- not rigid
- no fixed shape
- fixed volume



Gas



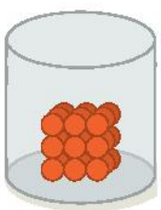
- not rigid
- no fixed shape
- no fixed volume



SOLIDS

Let us Try





Press a wooden pencil. Is the pencil hard? Yes / No.

Solids are things that have a definite shape and volume. They occupy a fixed space. The particles in solids are arranged very tightly. So they cannot move freely. Their shape can be changed only when we break or cut them.

Some examples for solids are given below.











3rd Science Unit 2 (States of Matter).indd 83 07/02/2023 13:15:51

LIQUIDS

Let us Do

1. Place four 1L bottles of different shapes on the table.
2. Take a bucket of water.
3. Call one child to hold the empty bottles and the other to fill water into them using a paper cup.
4. Ask the other children to fill the table as given below.

	Bottle 1	Bottle 2	Bottle 3	Bottle 4
Number of cups used				
Shape of the bottle (Draw)				



Think Zone

1. What is the shape of water in your bottle?
2. What happens if you pour water on the floor or table?

Did each bottle need same amount of water to get filled?

We can see that same amount of water is filled in each bottle and the shape of the water is same as the shape of the bottle.

Look at these pictures

Here we can see that the shape of the liquid is determined by the shape of the container.

Kerosene in bottle	Oil in cane / bottle	Milk in the jug	Juice in glass	Water in the glass
				

Liquids do not have a definite shape but occupies space. They have a definite volume. They take the shape of the container in which they are filled. Liquids move from one place to another. This is because the particles in liquid are loosely arranged. So, liquids can flow freely.



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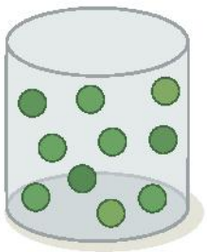
Let us Touch and Feel

Different types of liquids are placed in separate containers. Students are allowed to touch and feel each type of liquid. They are asked to tell the type of liquids on the basis of their stickiness/concentration.

Greasy liquid	Sticky liquid	Watery liquid	Thick liquid
			

GASES

When a perfume is sprayed or an agarbatti is lighted, the fragrance spreads all around the room. How?



The particles in gases are very loosely present. So they can move around freely in all directions. Hence, gases do not have a definite shape and do not occupy a definite space or volume.

Most of the gases are colourless. But when they are mixed with solid particles they show distinct colours.



Think Zone

Cooking gas in gas-cylinder has a smell. Why?

Here are some examples for gases.



Cloud



Smoke



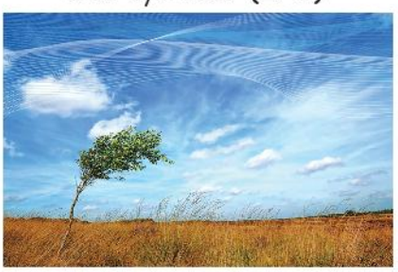
Gas cylinder (LPG)



Spray



Water vapour



Wind

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Let us Do

Say whether it is Solid or Liquid or Gas (Put 'S' for Solid, 'L' for Liquid and 'G' for Gas).

Falls



Chair



Air filled balloon



Cake



Juice



Jar with pebbles



Ice cube



Steam from soup in bowl



Pencil



Chocolates



Water filled in a bucket



Water in a glass



Milk



Brick



Biscuits



Fire



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Let us Read and Complete the table

Here are some properties of matter.

Fixed shape | No fixed shape | Fixed volume

No fixed volume | Flow all sides | Rigid

Copy the following table. Write each property in the correct column of the table. Some properties may belong to more than one column.

Properties of solids	Properties of liquids	Properties of gases

2.2. Change in States of Matter

Matters change their state as the temperature changes. Solid changes into liquid and liquid changes into gas on heating. Gas becomes liquid and liquid becomes solid on cooling.

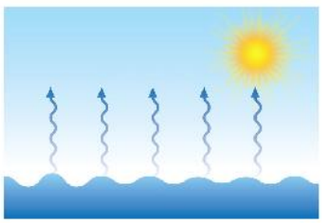
Melting

Change of solid into liquid on heating is called **melting**. For example, if ice (solid) is heated, it will change into water (liquid).



Let us Do

- Take some ice cubes in a container. Heat the container and observe the changes.
- Take some cheese in a container. Heat the container and observe the changes.
- Take some jaggery in a pan. Heat the pan and observe the changes.



Evaporation

Change of liquid into vapour on heating is called **evaporation**. For example, if water is heated, it will change into steam.

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Freezing

Change of liquid into solid on cooling is known as **freezing**. For example, water (liquid) poured in an ice-tray and placed in the freezer (fridge), gets cooled and becomes ice (solid).





Condensation

Change of gas into liquid on cooling is called **condensation**. For example, clouds (gas) on cooling condense and fall as rain (liquid).

Let us Think

What makes the coconut oil freeze in winter season?



Complete the Table

State of matter	Add	New state	Process
ice	+ heat		melting
water	+ heat	steam	
clouds	+ cool	liquid	
	+ cool		freezing

Think and Answer

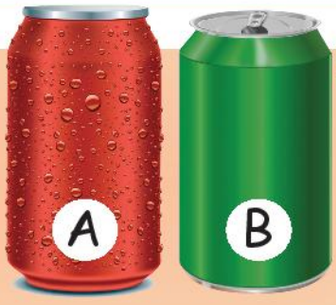
One of these cans was in the fridge and the other was not.

a) Which can was taken out from the fridge?

b) How do you know?

c) How did water droplets appear on the can A?

d) Why are there no water droplets on can B?



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Let us Observe

Take a balance. Keep an air filled football in one plate and an empty football in another plate. What happens?

Air filled ball goes down. It is because air has mass.



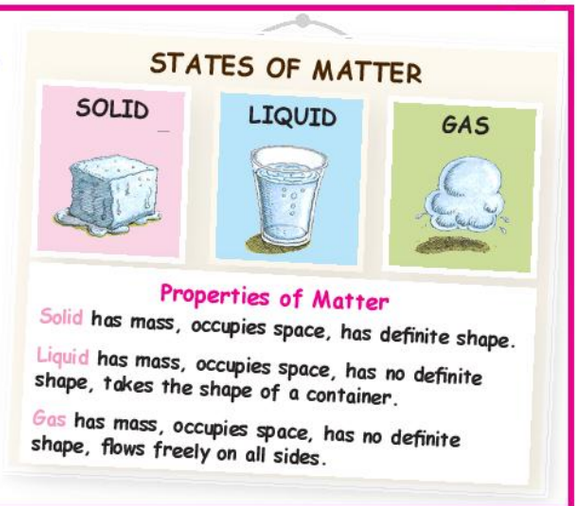
Do you know?

Air is a mixture of gases. You can feel the presence of air when the wind blows.

Let us Prepare - Anchor chart

1. Cut a chart into three pieces each of 15cm x 10 cm.
2. Write the properties of solid, liquid and gas in separate sheets.
3. Draw pictures related to the points.
4. Design the sheets with colourful borders.
5. Paste all the sheets in a large chart paper.

Your anchor chart is ready. Hang it on the wall.



Let us Understand

- Keep a stone on the floor. Does it move by itself?
- Pour a mug of water on the floor. Does the water flow? Does it flow in one direction?
- Take an air filled balloon. Prick it with a needle. Does the air rush out?
- Fill an open vessel with water. Press the surface of the vessel with your hands. How do you feel?

2.4. Materials used / not used for heating

Look at the pictures. Write down what you see.

(Wood, Leaf, Paper)



_____ burns



_____ burns



_____ burns

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Fuels

- Paper, firewood, dried leaves and charcoal can be burnt.
- Liquids like kerosene, petrol and diesel also burn on heating.
- Domestic gas and cobar gas are also fuels.

Substances when burnt give out heat. But in some substances, the heat released is very low. Thus, these are not used for heating purpose.

Substances that give out more heat while burning are used for heating purpose. These substances are called **fuels**.

Solid fuels



Coal



Charcoal



Wood



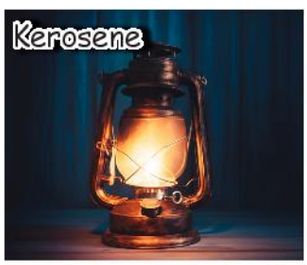
Cow dung

Gaseous fuels





Liquid fuels







Do you know?

Electrical energy is also used for cooking and transporting.

Match the following.

Liquid Fuel

Gaseous Fuel

Solid Fuel







3rd Science Unit 2 (States of Matter).indd 90 07/02/2023 13:16:06

EVALUATION

I. Indicate whether the following statements are true or false.

1. Solids have a definite volume.
2. Liquids can not flow.
3. We can melt any substance by cooling it.
4. Liquids can take the shape of the container.
5. Gases have a definite shape or volume.
6. Matter changes its state when heat is added or removed.
7. A fuel is a substance which gives heat energy on burning.

II. Fill in the blanks. (Evaporation, Mass, Water, Solid, Stone, Freezing)

1. The measure of matter in an object is called _____.
2. Change of liquid into vapour on heating is called _____.
3. An example for liquid is _____.
4. The change of liquid into solid on cooling is known as _____.
5. An example for solid is _____.

III. Draw a line to match the objects and their state.







Solid

Liquid

Gas







3rd Science Unit 2 (States of Matter).indd 91 07/02/2023 13:16:07

IV. Answer in a word or two.

1. Which of these is a solid? Wood / Juice _____.
2. Which of these is hard? Sponge / Glass / Cloth _____.
3. What are the three states of matter? _____, _____, _____.
4. Name three substances which change to liquid when they are heated?
5. In which state of matter the particles are very close to each other?
6. What state of matter is rain?
7. Which state of matter has definite volume but no definite shape?
8. What would cause a liquid to turn into a solid?
   a) Pouring it into a container b) Heating it until it boils
   c) Cooling it until it freezes d) Keeping its temperature same
9. Mention some properties of pencil.

V. Find me. (Liquid, Water, Wood)

1. I am essential for your life. I remain in all the three states. Who am I ?
2. I am a solid. I am obtained from the trees. I am useful for heating. Who am I?
3. I am one among the three states of matter. I have loosely arranged particles. I become vapour on heating. Who am I ?

VI. Describe the given words in one sentence.

1. Solid: _____
2. Liquid: _____
3. Melting: _____
4. Evaporation: _____
5. Freezing: _____

VII. Which change of state is taking place in each description below? Use these words.

Freezing	Evaporation	Condensation	Melting

a) An ice cube turning to water _____

b) Water turning to ice in a freezer _____

c) Change of liquid to vapour on heating _____

d) A bathroom mirror misting up _____

3rd Science Unit 2 (States of Matter).indd 92 07/02/2023 13:16:07

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Unit 3

FORCE

Learning Objectives

VPM2F

After learning this lesson, students will be able to

- define movements and actions.
- define force.
- know different types of forces.
- know about frictional force.
- understand the need and significance of frictional force.

3.1 Simple movements and actions

In our daily life, we do different actions such as pushing, pulling, twisting and turning. By doing these actions we move or change the shape of an object.

- Change in position of an object is called **movement**.
- **Action** is the motion which gives the required result.

Let us look at the pictures given below to understand movement and action better.



The player hits the ball with hockey stick



Boys are riding bicycle

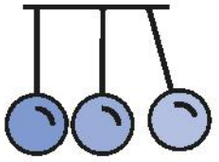
In the above pictures,

What moves? _____, _____

What is the action? _____, _____

Motion

When an object or a thing moves from one place to another, it is said to be in **motion**.



3rd Science Unit 3 (Force).indd 93 07/02/2023 13:17:17

Let us Speak



3.2 Force

Force is a push or a pull on an object which makes it move, changes its shape or stops it from moving.

- Force involves an interaction between two or more objects.
- Force can lift or drop an object.

Without force, we can not move any object.

NF0JB

Observe and Discuss



3.2.1 Push



Look and say. What kind of action do the pictures denote?



Here, all the pictures show pushing action.

When a force is applied in the direction of motion of an object, it is called **push**.

3rd Science Unit 3 (Force).indd 94 07/02/2023 13:17:19



3.2.2 Pull

Look and say. What kind of action do the pictures denote?







Here all the pictures show pulling action.

When a force is applied in the direction opposite to the direction of motion of an object, it is called **pull**.

Put a tick (✓) mark for the pictures of motion.











Classify the following - Push or Pull?

S.No	Activities	Push / Pull
1	Riding the bicycle.	
2	Moving the table towards you.	
3	Dragging the chair.	
4	Moving a car to start.	
5	Opening the window.	
6	Stretching the rubber band.	
7	Removing the shoe laces.	

3rd Science Unit 3 (Force).indd 95 07/02/2023 13:17:20

3.3 Effects of Force

Energy is needed to apply force

Force helps us to do the following things.

- Force can change the direction.
- Force can change the speed.
- Force can stop a moving object.
- Force can change the shape.



Force changes direction

Here, in the picture, a boy hits the shuttlecock and it reaches the other boy. He hits it again with the racket to send it back to the opposite direction.

Force changes motion

- The cycle moves forward because force is applied on the cycle by pedaling.
- When we stop pedaling and apply the break, the cycle comes to rest.



Some applications of force in everyday life



Opening the door



Pulling rope in tug of war



Pulling water from well

Force can change the speed

Force can change the speed of an object which is already in motion by providing more force on it.

Ram and his brother are playing with a toy car. Ram tries to move the toy car and his brother stops it from the opposite direction to slow down the toy car.



Thus, force changes the speed of an object.

3rd Science Unit 3 (Force).indd 96 07/02/2023 13:17:20

Force can stop a moving object



An object stops moving when we apply force in the opposite direction.

- Have you played football game?
- How will you stop the ball?
- The goal keeper applies force and stops the ball.

Force can change the shape

- When an inflated balloon or water balloon is pressed with both hands, some force is applied on both sides of the balloon. Thus, it changes its shape.
- While squeezing a plastic water bottle force is applied on all sides of the bottle. Thus, the shape and size of the bottle is changed.





Less force is required in pulling than in pushing. So it is easy to pull than to push an object.

Match the following.



Stops the motion

Changes the direction

Changes the shape

Changes the speed







3rd Science Unit 3 (Force).indd 97 07/02/2023 13:17:21

3.4. Types of Force

Contact Force

When a force is applied by touching the object, it is called contact force.



Eg : Lighting a match stick

Contact force is classified into three.

1. Muscular force 2. Mechanical force 3. Frictional force

Non-contact Force

When a force is applied without touching an object, it is called non-contact force.



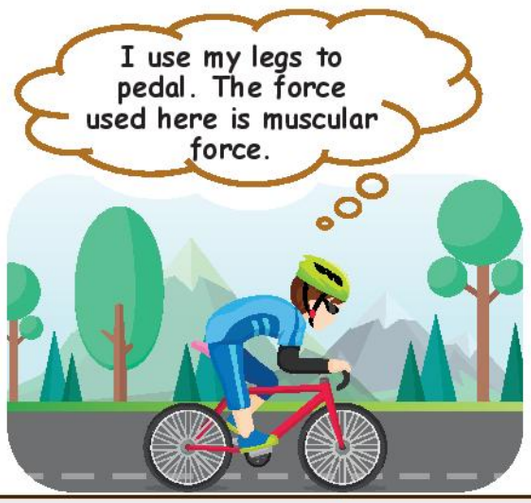
Eg. Vaccum cleaner, Magnet.

Non - contact force is classified into two.

1. Gravitational force 2. Magnetic force

Muscular Force

The force applied by using the parts of our body is called **muscular force**.





Mechanical Force

The force applied by a machine is called **mechanical force**.

Example:

Using bulldozer to dig ground.



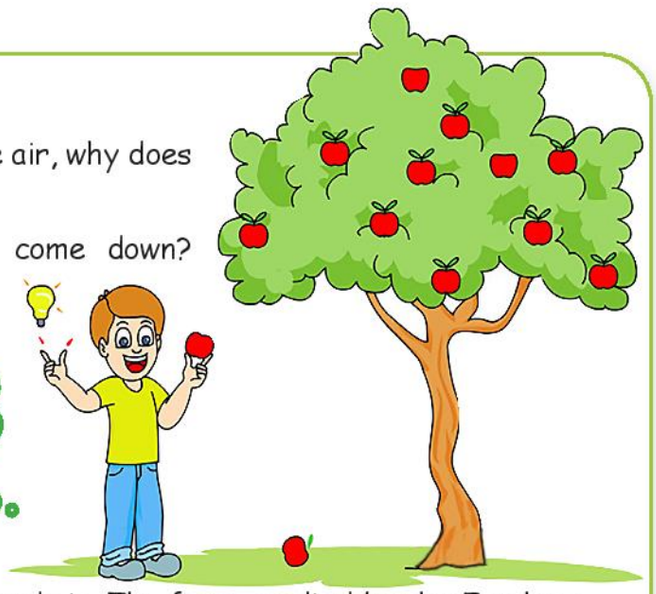
Grinding using a mixer grinder.



3rd Science Unit 3 (Force).indd 98 07/02/2023 13:17:24

Gravitational Force

- When you throw a ball up in the air, why does it come down?
- When we jump, why do we come down? Why don't we fly?



Why this happens?

The Earth pulls all the objects towards it. The force applied by the Earth to pull objects towards it is called **gravitational force**.

Magnetic Force

A magnet is a material that attracts things made of iron. The force that attracts such things is called **magnetic force**.



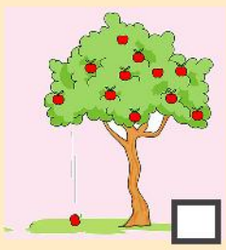
Observe the picture and write the kind of force involved here.






_____ _____ _____ _____

Tick (✓) the muscular force.




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Frictional Force

When we roll down a ball on grass ground, it slows down and finally stops. We know that an object cannot stop without force. The force that stopped the ball is frictional force. Force exerted by the surface when an object moves over it is called **frictional force**.



Think! Why do we sprinkle powder on the carom board before playing carrom?

3.5 Friction

When we use eraser on a paper, the shape of the eraser changes. Why? It is because of the friction between the eraser and the paper.

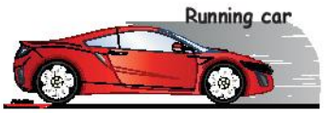
Friction is a force of actions between two surfaces in contact or when they slide over one another.

Do you Know? Early man accidentally discovered fire by rubbing two flint stones (chikimuki kal) together. The frictional force between two stones created a spark.









Classify



List out the push activities

_____

_____

_____

List out the pull activity

_____

_____

_____

List the frictional activity

_____

_____

_____

3rd Science Unit 3 (Force).indd 100 07/02/2023 13:17:27

EVALUATION

I2BFM

I. Fill in the blanks with suitable words.

(Push, force, pull, speed, gravitational force, direction, muscular)

1. A ---------is needed to make a stationary object move.
2. The force applied with the help of muscle is called ---------- force.
3. ---------- and ---------- are known as forces.
4. The reason for the fruits to fall from the tree is ----------.
5. Force changes the ---------- and ----------.

II. Match the words to the relevant pictures.







Hitting a ball
Lifting a car
Muscular force
Friction
Pulling
Mechanical force







III. Answer the following questions.

1. How do you open the door?
2. Name the types of force.
3. Which force is involved in collecting water from well?
4. What is push?
5. What kind of force is used to make clay pot?

IV. Sujatha places a magnet near some objects. What are the objects that will be attracted from the list given below?

(Note, Pin, Coin, Rubber, Shirt, Comb, Steel tumbler, Nail)

V. Think and answer.

Raja throws a ball, a stone, a paper and a leaf up in the air? What kind of force is involved here? What will happen to them?

3rd Science Unit 3 (Force).indd 101 07/02/2023 13:17:33

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Unit 4

Science in Everyday Life

Learning Objectives

After learning this lesson, students will be able to

- apply the knowledge of scientific principles in day-to-day life.
- observe the science that is applied in the kitchen.
- learn about the value of cooking items and their medicinal properties.
- explore scientific events in everyday life.
- measure the boiling point of water and milk.

ZQO3V

Introduction

What is Science?

Is Science important in our life?



Do you think science is separable from our day to day life?

Science is the study of the natural world around us. We learn science by observing, experimenting and describing.

Science is all around us. Examples of science can be observed from the time we wake up till we go to sleep and even while one is sleeping.

Science influences most aspects of everyday life, including food, energy, medicine, transportation and leisure activities.

How science is involved in daily life?

- Even in our sleep our body is working continuously. We dream while we sleep. It is also a science.
- When we eat food, our digestive system is doing work.
- Medicines, vessels and furniture we use are the products of science.

3rd Science Unit 4 (Everyday Life).indd 102 07/02/2023 13:19:51

4.1 KITCHEN SCIENCE

If one wants to explore science in everyday life, then kitchen is the right place to start. To understand how water boils or how Idlis are cooked, we must know science.

Boiling Water



a)



b)

What do you infer from the above pictures?

The **first** picture shows **boiling water** and the **second** shows **boiling milk**.

What is boiling?

Heating a liquid until it becomes gas is called boiling. Boiling the water means to heat the water until it becomes gas and mixes with the air.

Boiling Point

The **boiling point** of a substance is the temperature at which the liquid boils. At this temperature, the liquid changes into gas.

Benefits of boiling water

- Destroys germs.
- Improves digestion.
- Prevents us from the infection of waterborne diseases.

Cooking Idli

Idli is a common and usual breakfast of Tamil Nadu.

- What process is involved in the preparation of Idli batter?
- What type of cooking process is involved in making Idli?

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Do you know the ingredients used for making Idli?

1. Rice (Boiled rice)
2. Black gram (Black Lentils)
3. Fenugreek (Vendayam)
4. Salt

Idli batter produced from the things mentioned above is fermented for 8 hours before use.

Idli is cooked by the method called **steaming**.

Idli is prepared using idli cooker.

Idli Making

1 Soaking rice and blackgram in water



2 Grinding



3 Allowing it to ferment



4 Steaming in Idli cooker



Advantages of Steaming

- Easy cooking method.
- Steamed food is easily digested.
- Steamed food retains Vitamin C and E.

Idiyappam

We cook Idiyappam by steaming. Idiyappam is prepared from rice.



3rd Science Unit 4 (Everyday Life).indd 104 07/02/2023 13:19:54

Let us Taste - Varieties of Idlis

In order to attract the children and customers, caterers make varieties of idli by mixing the batter with grated beetroot or grated carrot and serve them as beetroot idli or carrot idli.





Let us Think

The doctor advices patients to have Idli or Idiyappam. Can you guess, why?

Tick (✓) the item which you see in your kitchen.



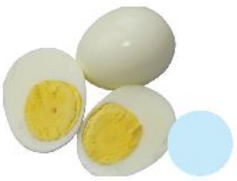







Tick (✓) the food items which are made by steaming.










3rd Science Unit 4 (Everyday Life).indd 105 07/02/2023 13:20:02

Arrange the pictures in correct order.








4.1.1 Home appliances - Pressure Cooker

How would our life be without the following?

1. An electric bulb - _____
2. A fan - _____

Things like electric bulb and fan are called home appliances.

It is not easy to run our life these days without home appliances. Home appliances are machines that make life easier and convenient. In this section, we will learn about few such appliances.



- Look at the picture and name it.
- Can you list the uses of this utensil?

Cooking food using water in a sealed vessel (cooker) is called pressure cooking.

Benefits of Pressure Cooker



Saves time.

Minimizes the usage of fuel and saves energy.





Retains nutrients in food.



Pressure-cooking can cook food four times faster than ordinary cooking.

3rd Science Unit 4 (Everyday Life).indd 106 07/02/2023 13:20:07

Let us Discuss

1. Which one takes less time to cook pulses?
   a. Pressure cooker b. Mud pot
2. List out the food items prepared by pressure cooker. Discuss with your friends.

4.1.2 Other Home Appliances

Let us learn about some common home appliances and their uses.

Common Home Appliances and their Uses



Gas stove

Cooks faster by controlling heat.

Mixer



Grinds hard spices, used to prepare chutney and juices.



Grinder

Grinds food grains to produce batter.



Vegetable Cutter

Chops vegetables.



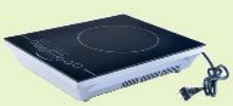
Kettle

Boils water and heats tea and coffee.



Electric cooker

Heats and cooks food by using electricity.



Induction Stove

Used as a substitute to stove.



Coffee Maker

Makes coffee or tea.

3rd Science Unit 4 (Everyday Life).indd 107 07/02/2023 13:20:12

A **refrigerator (Fridge)** is a popular home appliance used for preserving food. It works on the principle of cooling.

The fridge has a pump that transfers heat from inside to outside. This helps it to keep things cold.

The cold temperature inside the fridge slows down the bacterial growth in food and thus preserves the food for a longer time.



Safety Measures in Kitchen

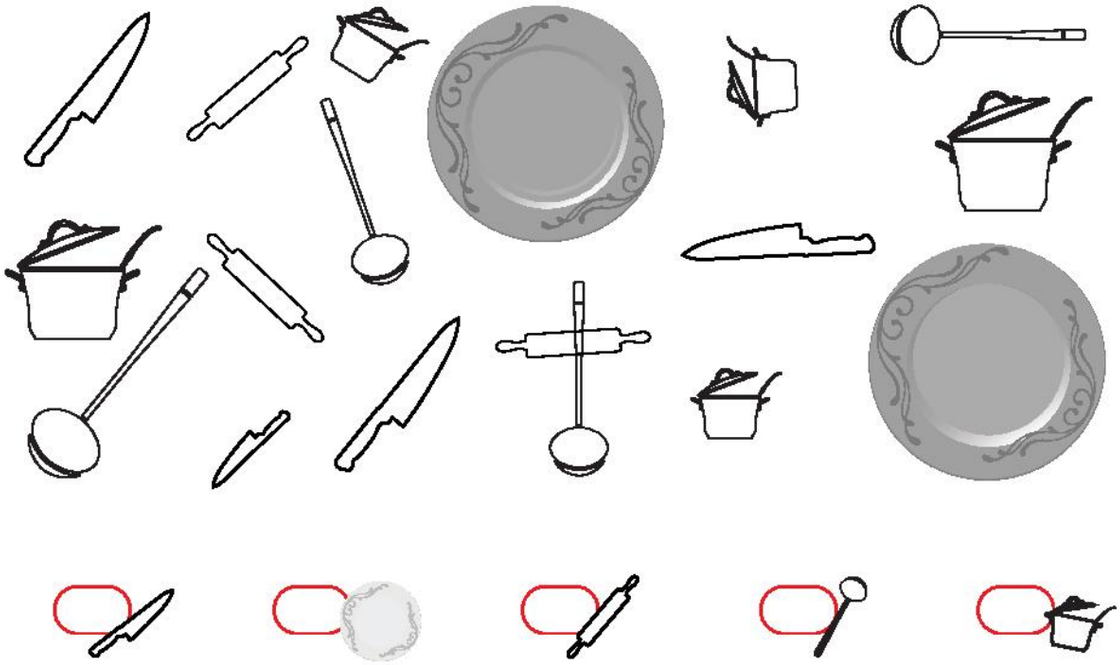
- Never play with kitchen utensil such as knives, match boxes and glasswares.
- Use a cloth to hold hot pans.
- Inform an adult in case you smell cooking gas leakage.
- Turn off the gas stove, microwave oven and any other electrical gadget immediately after use.

Match Column A with Column B.

A		B	
a		-	
b		-	
c		-	
d		-	
e		-	

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Count and colour the objects.



4.2 Medicine in the kitchen

In the past times, kitchen medicine was practiced in every house. People knew how to treat some of the ailments of the family members and manage emergencies with what was available in the kitchen.

Is it not amazing to know that we have a pharmacy in our kitchen? Let us learn about a few things in the kitchen which are used as medicines.

Importance of some kitchen medicines

Garlic



Garlic is called the poor man's antibiotic. It helps to balance blood pressure and reduces symptoms of common cold.

Asafoetida

It improves digestion. It is used as a remedy for diarrhoea and dysentery.



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Ginger



It helps to improve digestion. It also reduces nausea.

Turmeric

It is a common anti-infectant and it helps to heal wounds.



Black Pepper



It is a great remedy for colds, coughs.

Cloves

It helps to relieve toothache.



Try in your home

Coriander juice



This juice is made from the coriander leaves. It helps to reduce chest congestion. It is rich in iron and vitamins A, B and C.

Preparation of coriander tea

This is made from coriander seed powder. One tablespoon of powder is mixed with two or three cups of water. Jaggery is added and they are boiled for 5 minutes. It improves digestion.






What are your favourite food items? Do you know the ingredients present in them? Do they have any medicinal value? If so, write in the table.

S.No.	My favourite food	Ingredients	Medicinal value

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4.3 Simple Scientific investigations in Daily Life

The curiosity of science starts from home. It is promoted by simple scientific investigations of the things that the children see around them or use daily like, why the leaves are green in colour? what is the difference between the sun and the moon? how does the television work?

Shall we learn about few simple investigations?

4.3.1 Object and Shadow

For what?

To learn how the shadows are formed.



How?

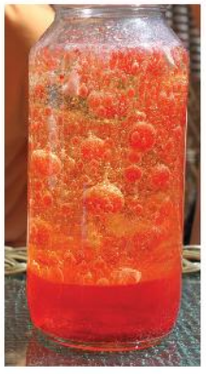
1. Make the classroom dark.
2. Light a candle.
3. Place a toy near the candle. What do you see?
4. Move the toy away from the candle. What do you see? Move the toy closer to the candle. What do you see?
5. Experiment and see what happens to the shadow if the light source is dim?

Complete the sentence.

- Moving the toy closer to the candle made its shadow _____.
- While moving the object away made its shadow _____.
- The big candle is bright and gives _____ shadow.
- The small candle is dim and gives _____ shadow.

Lava in a Cup

You will need: A tall glass cup, 1/4 cup vegetable oil, 1 teaspoon salt, water, food colour.



What to do?

1. Fill about 3/4th of the glass with water.
2. Add about 5 drops of food colour (Red).
3. Slowly pour the vegetable oil into the glass. See how the oil floats on top.
4. Sprinkle the salt on top of the oil.
5. Watch blobs of lava move up and down in your glass! Add another teaspoon of salt to keep the effect going.

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What happens when you

add oil to water?	
add colour to the mix?	
add salt to the mix?	

First of all, the oil floats on the top of the water because it is lighter than the water. Since the salt is heavier than oil, it sinks down into the water and takes some oil with it, but when the salt is dissolved, the oil goes up again. Is it not interesting?

4.4 Measuring Temperature of Water and Milk using Thermometer



W7OY0



- Have you seen this device?
- Where have you seen this?
- Do you know the use of thermometer?

Usually, our body temperature is lower in the morning. It increases during the day and is higher in the evening. Other than this, a rise in body temperature is usually caused by an infection. Using a thermometer to check our temperature can help us manage any illness.

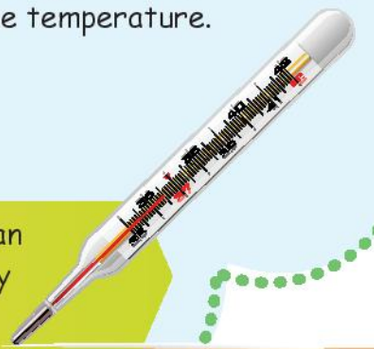
What is a thermometer?

Thermometer is an instrument used for measuring body temperature. It consists of a narrow, sealed glass tube, marked like a scale. The markings show the temperature.





Daniel Fahrenheit, a German physicist, invented mercury thermometer in 1714.



3rd Science Unit 4 (Everyday Life).indd 112 07/02/2023 13:20:24

Let us measure the boiling point of water using thermometer

Boiling point of water is 100°C





Things Needed : Water and thermometer

Procedure :

Heat the water. Measure the initial temperature, when the water starts to boil. Allow it to boil for few more minutes and measure the temperature.

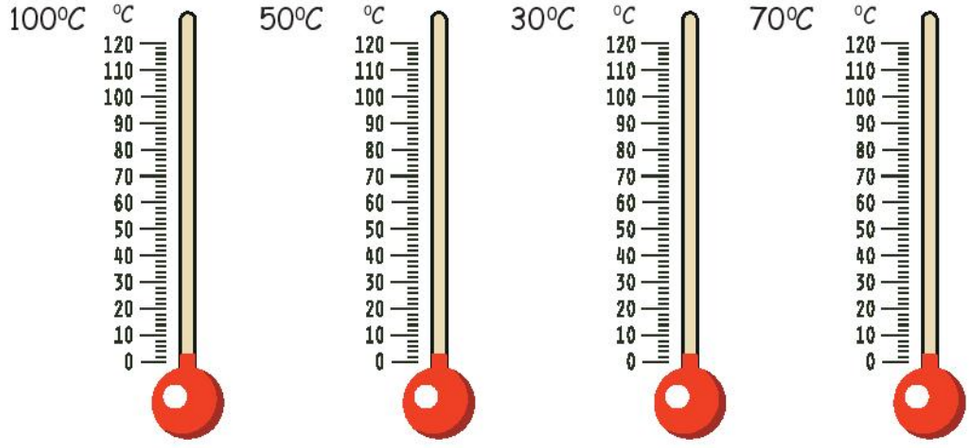
The temperature remains the same when the boiling point reaches 100°C and continues to boil for some more time.

Similarly, the boiling point of milk can also be measured using thermometer.

Colour the thermometer to match the temperature written in the box.



100°C 50°C 30°C 70°C



EVALUATION



I. Say whether the following statements are true or false.

1. When we boil water, bacteria are destroyed.
2. Idli is cooked by the process called steaming.
3. Thermometer is used to measure pressure.
4. Refrigerator helps to keep things cold.
5. Garlic relieves hiccups and nausea.
6. Boiling point of water is 100°C.



II Circle the name of the things from which Idli is made.

Rice	Groundnut	Chilli	Black gram	Red gram
Water	Salt	Pepper	Sugar	Fenugreek

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III. Match the home appliances and their functions.





Makes coffee

Preserves vegetables

Boils water

Makes batter of food grains

Cooks faster







IV. Which of these are safe to do at home? Put (✓) or cross (×) in the box.

1. Touching electrical appliances. ☐
2. Playing with sharp objects. ☐
3. Playing in kitchen. ☐
4. Keeping safe distance from the gas stove and cylinder. ☐

V. Answer in a word or sentence.

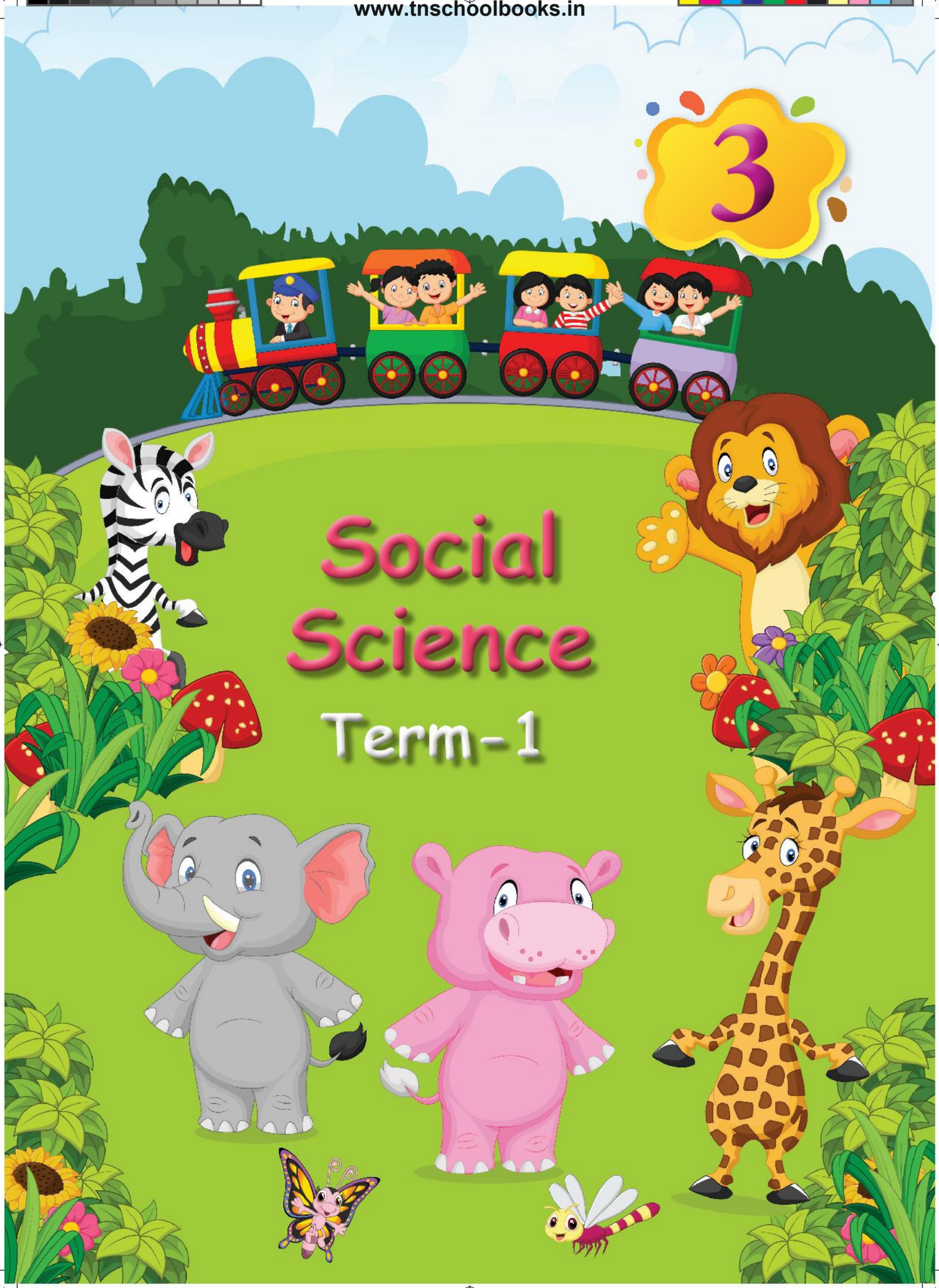
1. How do you store fruits and vegetables for a longer period?
2. Name the instrument used to measure temperature.
3. How is Idli prepared?
4. What is the use of black pepper?
5. Which kitchen medicine is called the poor man's antibiotic?

VI. Answer the following.

1. Write the uses of boiled water.
2. Write the advantages of pressure cooker.

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UNIT 1 Family





Learning Objectives

- Know about the family.
- Understand the relationship of family members.
- Know about the types of families.
- Recognise differences between relations and society.
- Understand that family gives feeling of security.



90CBO

DIALOGUE



(**Madhi** and **Kabir** are friends. Both the friends meet in the market.)





Madhi : Hi! Kabir, It has been so long since we met. How are you?

Kabir : Yeah, I am fine, thanks. I am so happy to see you. How are you?





Madhi : Yeah, I'm fine too. Do you know I went on a tour to Nilgiri jungle (Masinagudi) with my uncle.

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Kabir : Really. I don't know. Tell me more.

Madhi : It is a wonderful place to visit. We saw many birds and animals living in the jungle.

Kabir : Oh! I see.

Madhi : Yes! I can't express my experience in words! It was wonder to see animals living as a family.

Kabir : Families! Do the animals live in families like us?

Madhi : Yes its true, If you get a chance please go and see.

Kabir : Sure, I will tell my daddy to take me there during this holiday.

Madhi : Mmm. good... Shall we play a word game now? I will ask you questions and you should answer.

Kabir : I am always ready for a challenge. Ask me any questions.

Madhi : Where do lions live?

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Kabir : Very simple. Lions live in jungle.

Madhi : Correct, But Lions live together as a family in caves.





Kabir : Ok, Ask me the next question.

Madhi : Where do birds live?





Kabir : Birds live in the nests, built on trees or in high places.

Madhi : Good. What do we call a group of elephants?





Kabir : **Herd.** Am I right?

Madhi : Exactly, you are right.



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Kabir : We learnt that animals live together.

Madhi : Yes, it is true. I'm happy to share my experience with you.





Kabir : Okay! It's time to move.

Madhi : Yes! Let us also join our families.



Dear friends, Let us know about our families.



W9LKT

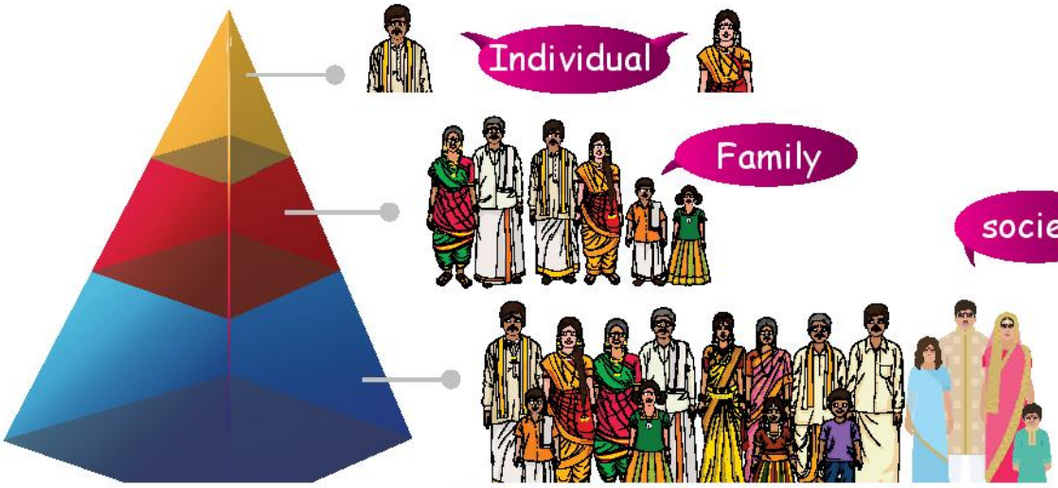
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Our Family

Father, mother, children and other close relations live together is called a **family**.



How many families live in your street?



Individuals together make a family and families together make a **society**.

A0KRC

People with **diversity** in language, culture and habits live all over the world in families.



Indian family



Mexican family



Chinese family



African family



Scottish family



Russian family



Japanese family

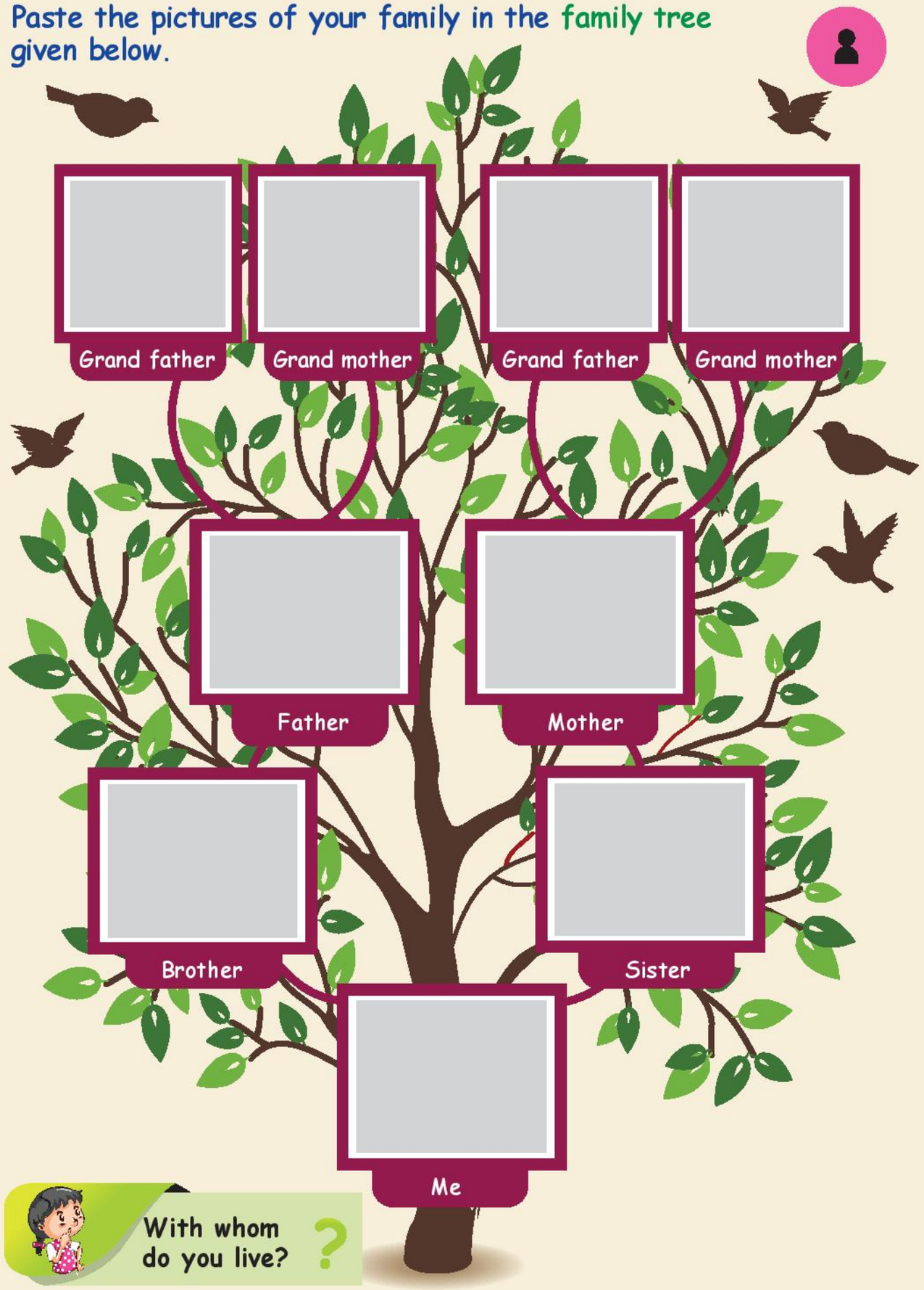


Arab family

3rd_Social_Science_Unit_1.indd 121 31/01/2023 17:14:06

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Paste the pictures of your family in the family tree given below.



With whom do you live?

3rd_Social_Science_Unit_1.indd 122 31/01/2023 17:14:07

Relations

Maternal Relations

Relations through our mother are called **Maternal Relations**

Paternal Relations

Relations through our father are called **Paternal Relations**











ACTIVITY

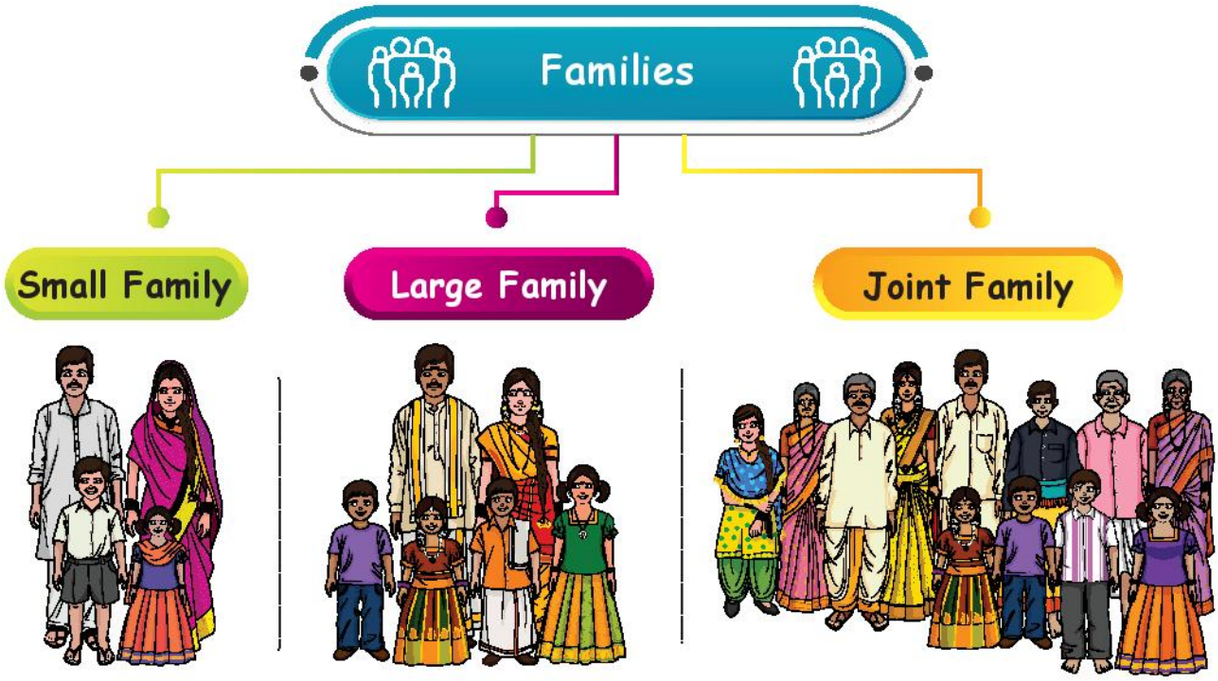
Let us write

List out the names of your Maternal relations and Paternal relations of your family.

My Maternal relatives	My Paternal relatives
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3rd_Social_Science_Unit_1.indd 123 31/01/2023 17:14:07

Types of families



What do you see in the pictures given above?

1. In the first picture only mother, father and children are seen. This type of family is called a **small family** or a **nuclear family.**

2. The family in the second picture is having father, mother and more than two children. This type of family is called a **large family** or an **extended family.**

3. The family in third picture is very big. We can see that two or three generations live together. This type of family is called a **joint family.**



3rd_Social_Science_Unit_1.indd 124 31/01/2023 17:14:09

Special values of the family

- Family fulfill our basic needs like food, clothing and shelter.
- Family is the first school for the development of physical and moral growth of a person.
- There are several values that bind the family members together. Such **values** are:

Love and Affection



Respect



Protection



Sharing













ACTIVITY
Let us write



List out the other values that bind the family members together.

Tolerance

_____

_____

_____

_____

3rd_Social_Science_Unit_1.indd 125 31/01/2023 17:14:11

Unity of the family

It is better to work together than to do it alone. In this way work load will be reduced and relationship will be strengthened. This will help for the **Unity of the family.**



As children it is good to do our work by ourselves. It is better to manage and keep our things in the right places. This not only makes us disciplined but also helps us to save time, as we have to spend time to search for things.



How do you manage your things? Discuss with your friend.

Our – Relations

Apart from our family members, distant relatives also come to our house. All the family members meet during family festivals. When they come to our house we should welcome them. We should talk with them and help them to fulfill their needs. This is the way to respect them. **Hospitality** towards guests is the best value among Tamilians. This strengthens our relationship.

How do you call your relations?

1. Mother's mother _____
2. Father's father _____
3. Father's sister _____
4. Mother's brother _____



How should you behave when the relatives come?

3rd_Social_Science_Unit_1.indd 126 31/01/2023 17:14:11

ACTIVITY
Let us find



Gardening



Washing

WHO DOES WHAT?



Earn for the family



Going to shop



Hospitality



Switch off the lights and fans when not in use

3rd_Social_Science_Unit_1.indd 127 31/01/2023 17:14:13

Outsiders

Apart from our relatives, other people like milkman, vegetable vendor, newspaper man and cylinder supplier are called an **outsiders.**

Neighbours

Many families live near our home. We call them **neighbours.** It is good to keep cordial relationship with them. When needed, we must help each other. This value ensures our safety.

LET US KNOW

Some families are rearing **pet animals** like their family members.





Is there any pet animal in your house?

3rd_Social_Science_Unit_1.indd 128 31/01/2023 17:14:13



Budget of the family

Income and Expenditure is important for any family. We must spend according to our income. Basic needs should be fulfilled first. We must act according to the **budget system.** Economic crisis occur when expenditure exceeds income. **Simplicity** is the best policy.



Glossary

Fulfill : achieve
Hospitality: warm reception
Values : moral principles



How many members in your family earn for livelihood?



Do you save money?



Recap

- Basic unit of the society is family.
- Basic needs like food, clothing and shelter are fulfilled by the family.
- Inter dependence of family members help in becoming good citizens and develop harmony.
- Family teaches us the values of discipline, morals and the habit of sharing.
- A family must run within the budget to ensure economical security.
- Family helps us to feel safe and secure.

3rd_Social_Science_Unit_1.indd 129 31/01/2023 17:14:15

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EVALUATION



I. Choose the correct answer.

1. The basic unit of the society is_____.
   a) village b) town c) family

2. _____ is one of our basic needs.
   a) Sofa b) Shelter c) Car

3. Father, mother and children living together is called _____
   a) small family b) big family c) joint family

4. _____ is the best cultural value of Tamilians.
   a) Hospitality b) Celebrating festivals c) Earning wealth

5. Running the family by preparing _____ is the best way to improve economy.
   a) wealth b) money c) budget

II. Match the following.

1. Character	-	should live in unity
2. Sharing work	-	uncle
3. Maternal relation	-	vegetable vendors
4. Outsiders	-	improve relationships
5. Neighbours	-	respect

III. True or False.

1. A family fulfills all our basic needs. ( )
2. Our neighbours are our relatives. ( )
3. Our economy improves when expenditure exceeds income. ( )
4. We must keep our things in their respective places. ( )
5. Simplicity is the best policy for every family. ( )

3rd_Social_Science_Unit_1.indd 130 31/01/2023 17:14:16

IV. Answer the following.

1. Name the types of families.
2. What do you mean by joint family?
3. What are the values that we learn from our family?
4. Who are our neighbours?
5. Write a note on 'Budget'.











FUN WITH ACTIVITY

PROJECT

Prepare your family budget on the basis of the table given below and put a tick at the right place.

Income (Rupees)		Expenditure (Rupees)	
Criteria	Amount	Criteria	Amount
Salary (income)		Rice, groceries	
		Vegetables	
Other source of income			
Total		Total	

- Income and Expenditure are same ☐
- Income is more than expenditure ☐
- Income is lesser than expenditure ☐

2RKCLE

3rd_Social_Science_Unit_1.indd 131 31/01/2023 17:14:16

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UNIT 2 Our Friends



Learning Objectives

- Know about our friends.
- Recognise their nature of work.
- Understand the importance of our community workers.



ASXJN



A seven years old girl named Samudra goes to the market to buy some groceries along with her mother Vennila. While walking, they come across so many people working.



3rd_Social_Science_Unit_2.indd 132 30/01/2023 15:43:48

Mother Vennila: Dear **Samudra**, keep yourself right and don't go to the centre of road. As we go deep into the market the crowd will increase. Don't run away.

Samudra: Okay Ma, What sound is that? Is that a bell?

Mother: It's the sound of a fire engine. I think a fire accident has occurred somewhere.

Samudra: Is it? Oh my God!

Mother: The bell is a warning to the people on the road. So that they can give way to the fire engine.

Samudra: Why should one give way to it?

Mother: It's an emergency. It has to go fast and reach the spot to save people and their properties.



3rd_Social_Science_Unit_2.indd 133 30/01/2023 15:43:49

Samudra: How can the vehicle save people?

Mother: I am proud to see that you are curious. The vehicle has many trained firefighters, who save people and properties with the help of water, foam, ladder and other fire extinguishing objects and devices. This vehicle is not only used during fire accidents but can be used in other emergencies and disasters too.

Samudra: Ma...Tell me more about the **firefighters**. It's amazing. Are they not afraid of fire?

Mother: The **firefighters** are well trained to carry out their duties. They wear protective jackets. They pump and send water on the affected part of the building. They shift people and property to a safer place.

Samudra: How do they save the people who are trapped in fire?

Mother: People with burns are sent in an ambulance to the government hospital. This vehicle contains all the facilities for first aid. The victims are admitted in the hospital and given treatment.



3rd_Social_Science_Unit_2.indd 134 30/01/2023 15:43:51

ACTIVITY

Let us write

Nurse is a person who assists the doctor and takes care of the patients. Complete the below activity with the various duties of a nurse.



Stitches the wound

Injects the patients

Nurse

Samudra: Can everyone go in this vehicle?

Mother: This vehicle is meant only for those who are in need of emergency treatment.

Samudra: Emergency treatment?

Mother: It is needed by people whose lives are in danger. Like, People who suffer from heart attack, faint, unable to walk, fall victim to accidents and so on.



3rd_Social_Science_Unit_2.indd 135 30/01/2023 15:43:54

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Samudra: How does one get treatment in this vehicle?

Mother: We do not get treatment. But we can get first aid.

Samudra: First aid?

Mother: **First aid** is a life saving treatment that is given before the actual treatment of a victim. This ambulance contains a doctor, a nurse and all the first aid devices and medicines.

How can one call the **ambulance?** ?

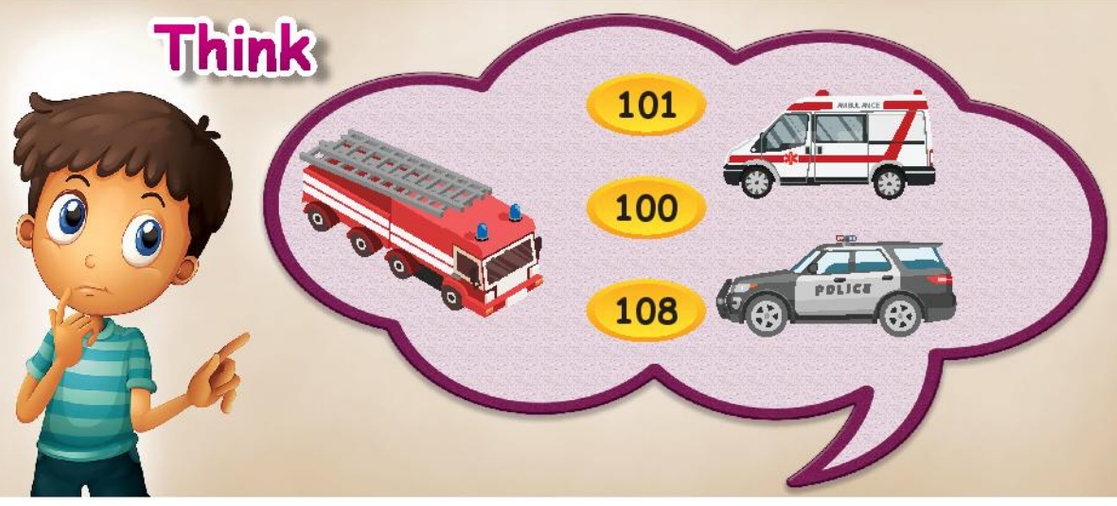
LET US KNOW

Good Samaritan Law

Good Samaritan Law was executed by Central government in the year 2014 to safeguard those who help the victims of accidents and other calamities.

According to this law, any person can help the victim and accompany him/her to the hospital. The person need not reveal his/her name or pay for the victim's treatment. This law helps the people to come forward to help others who are in need, without the fear of police, rules and regulations and so on.

Think



3rd_Social_Science_Unit_2.indd 136 30/01/2023 15:43:56

Samudra: What building is this?

Mother: This building is built to extend the market.

Samudra: What is the building built for?

Mother: It is built so as to protect people and traders from sunshine and rainfall.

Samudra: Who built this building?

Mother: A **civil engineer** built it. He gave structure and design to the building.

Samudra: Does a **civil engineer** design a house?

Mother: Yes of course, he designs houses, schools, colleges, bridges, multi storey buildings, temples, settlements, shops, factories, and so on. Buildings are constructed using a plan made by a civil engineer.

Samudra: Oh! I see. Ma...Why are we going through this mud path? This is not our regular route.



3rd_Social_Science_Unit_2.indd 137 30/01/2023 15:43:57

Mother: Repair work is going on in our usual tar-road.

Samudra: Are these roads laid for us?

Mother: Yes of course, for us. The roads are laid by **road workers** to make travel easy for the pedestrians and vehicles.

Ok. **Samudra**, Look at the either side of this way.

Samudra: Why ma?...What is special?

Mother: Don't you think the green fields are beautiful?

Samudra: Yes. they are. Who are the people working here?

Mother: They are **farmers**. Because of them we get food and live happily.

3rd_Social_Science_Unit_2.indd 138 30/01/2023 15:43:58

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ACTIVITY
Let us find

Solve the puzzle



1. You can hear my ding dong before I come.
   Lives are saved, properties are protected from fire.
   Who am I? _____ Hint: iefr eginen

2. I keep people safe. I protect our community from crime.
   I make sure people follow the rules.
   Who am I? _____ Hint: ecplio

3. I toil (hard work) in the soil. I plough to sow, so that mud could give us food.
   Who am I? _____ Hint: emarfr

Samudra: Ma... Can you see that bus?

Mother: Yes... Bus is one of our transport services. Like **firefighters**, **farmers**, **engineers** the service of **drivers** and **conductors** are also very valuable. They are the people who carry out the transport service efficiently.

Samudra: Ma...Can you hear an unusual alarm somewhere near?

Mother: Yes! That is the siren of the **police**.

3rd_Social_Science_Unit_2.indd 139 30/01/2023 15:44:00

Samudra: Why **police**? Is something wrong?

Mother: This is an usual visit of the **police** during the evening in the market. They come here to discipline as it's over crowded at this hour. They protect people, their properties and make sure all the rules and regulations are followed by all.

Samudra: Ma...

Mother: What?

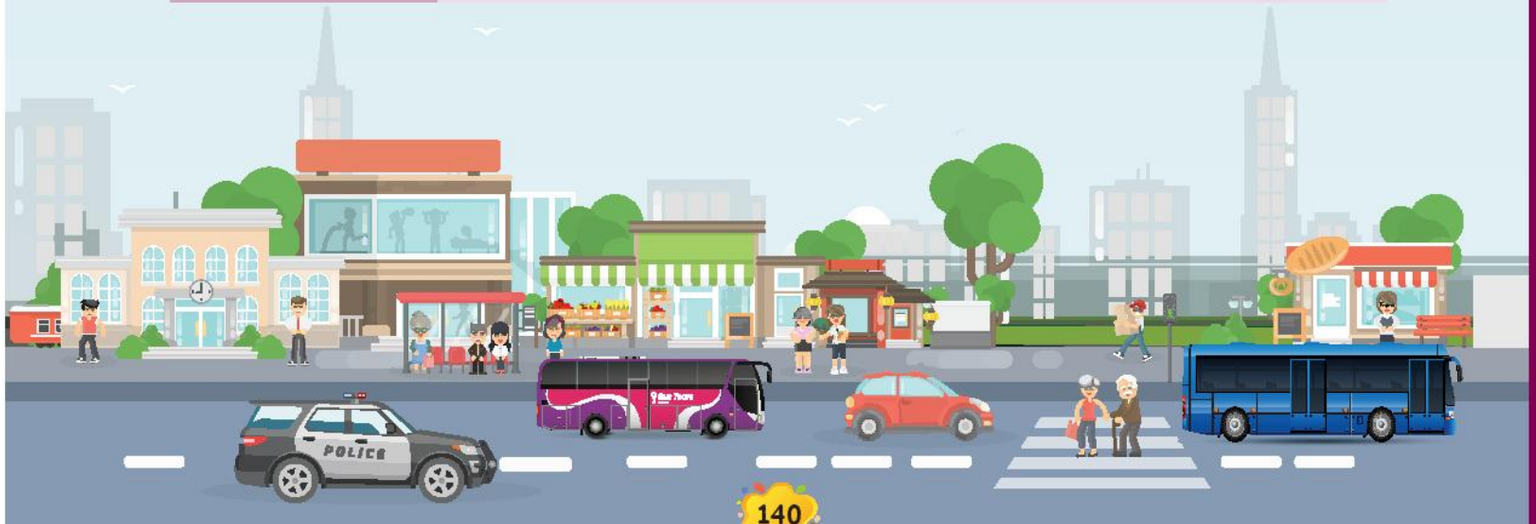
Samudra: You once said that our neighbourhood anna (elder brother) is serving in the border. What does it mean?

Mother: He serves in the Indian border as a **soldier**, fighting to protect the people of our country from enemies. There are many soldiers who defend the country sacrificing their own lives and families. These soldiers together form the Army of the defence force.

LET US KNOW



Netaji Subash Chandra Bose formed Indian National Army.



3rd_Social_Science_Unit_2.indd 140 30/01/2023 15:44:01

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Samudra: Now I remember... Our **teacher** told us about the army yesterday in the class.

Mother: Samudra, Do you know? The service of a **teacher** is a noble one that enlightens us with knowledge, values and helps people to become good citizens.

Dear, we have come to the main road, hold my hand.

ACTIVITY

Who am I?

Fill in the following blanks:

a) I ---------- clothes.

b) I am a ----------.



Tailor

a) I ---------- wall.

b) I am a ----------.



Painter

a) I ---------- pipes and taps.

b) I am a ----------.



Plumber

a) I ---------- houses and people.

b) I am a ----------.



Watchman

a) I ---------- electrical appliances.

b) I am a ----------.



Electrician

3rd_Social_Science_Unit_2.indd 141 30/01/2023 15:44:04

Samudra: Ma... Who is standing in the middle of the road?

Mother: Oh! He is the **traffic police man.**

Samudra: Why is he standing there?

Mother: His work is very important because he controls the vehicles coming from all sides.Thus he directs the vehicles and protect the pedestrians.

Samudra: Ma...Look at the gigantic building over there. What building is that?

Mother: That is the **Court.**

Samudra: Court! What's that?

Mother: Here, all the problems are solved as per the laws(rules) of our country. **Judges** treat all men with justice in various cases. They protect our rights.

Samudra: Ma...Now I understand that all these people whom we came across today are working for us. I feel very proud of them.



3rd_Social_Science_Unit_2.indd 142 30/01/2023 15:44:05

LET US KNOW

The Supreme Court is the Guardian of the Constitution.

Mother: Samudra, Do you have any wish? What would you like to do in your life?





Samudra: Yes, I have a wish. I want to study well and seek a good job. At the same time, I would like to look after our garden and field with care.

Mother: At last we have reached our home. Dear.... please open the door.





Glossary

Enlightens : educate
Guardian : protector
Protect : save



Recap

- Our friends like teacher, doctor, engineer, police are working for us.
- Firefighters save people and properties from fire.
- A civil engineer gives structure to the building.
- The roads are laid by road workers.
- We are getting food from farmers.
- Soldiers protect our country.
- We should be proud of the people who served for us and also for our country.

3rd_Social_Science_Unit_2.indd 143 30/01/2023 15:44:05

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EVALUATION



I. Choose the correct answer from the list given below.

(roads, judge, first aid, doctor, teacher)

1. _____ is a lifesaving treatment which is given before the actual treatment to a victim.
2. Nurse assists the _____.
3. _____ is giving justice to the people in various cases.
4. _____ enlightens us with knowledge.
5. Road workers lay _____.

II. Write True or false.

1. A tailor stitches the clothes. ( )
2. An electrician fits pipes and tubes. ( )
3. Traffic police man controls traffic. ( )
4. Doctors protect people and properties. ( )
5. The Supreme court is the guardian of the constitution. ( )

III. Answer the following.

1. Name some people who serve us.
2. Who are firefighters?
3. What does a civil engineer do?
4. Write about farmers.
5. How do the soldiers protect our country?

3rd_Social_Science_Unit_2.indd 144 30/01/2023 15:44:06

FUN WITH ACTIVITY

PROJECT

270IX

Match the tools with the community helpers and write their task they perform.

1) 

2) 

3) 

4) 

a) 

_____

b) 

_____

c) 

_____

d) 

_____

3rd_Social_Science_Unit_2.indd 145 30/01/2023 15:44:10

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UNIT 3 Panchayat



Learning Objectives

- Know about our Panchayat system.
- Understand that Panchayat provides the basic facilities to the village people.
- Know about the duties of Gram sabha.
- Know about the local self government.





75BJ6

3rd_Social_Science_Unit_3.indd 146 04/02/2023 11:06:19

Dandora Announcement!

"A special Gram Sabha meeting will be held on Independence day. All the villagers are requested to participate".



3rd_Social_Science_Unit_3.indd 147 04/02/2023 11:06:19

After hearing the announcement, Iniyan rushed towards his home.



Iniyan: Dad...what did the dandora announcer say?

Dad: He announced that a special Gram Sabha meeting would be held on Independence Day.





Iniyan: What is Gram Sabha meeting? What will they do in the meeting?

Dad: People of our village assemble together and discuss the roles of the Panchayat board.



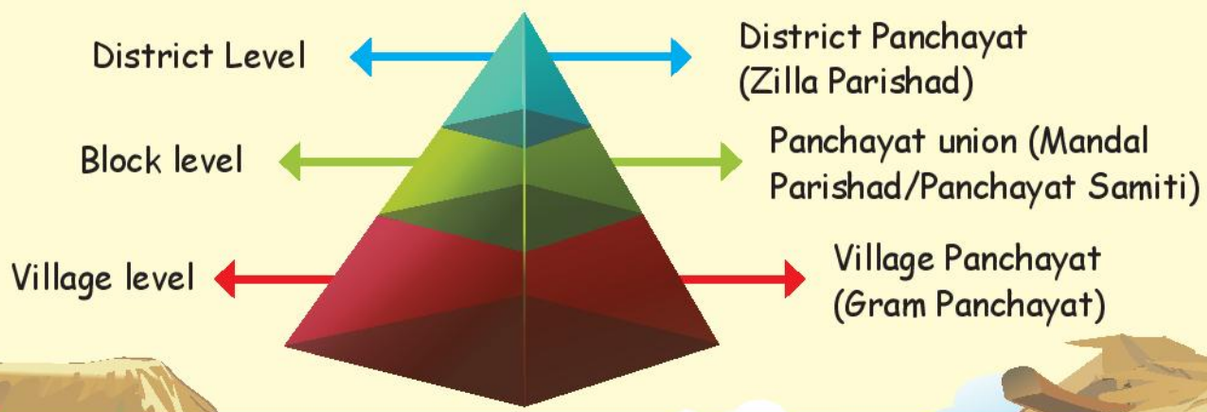


Iniyan: Oh, I see! What is meant by Panchayat board Dad?

3rd_Social_Science_Unit_3.indd 148 04/02/2023 11:06:20

Dad: I'm so glad about your questioning. Let me tell you about the Panchayat. Our country is a vast country. It has towns and villages. Therefore many Panchayats must exist. Village Panchayat is the root of Panchayat System. It provides the basic facilities to the village people. The **73rd Constitutional Amendment Act** came into force in April 1993. The salient feature of **73rd Constitutional Amendment Act** is the **three tier** system of **Panchayat Raj**. Panchayat have been setup in every village with 500 people and above.







Iniyan: Dad...Who are all there in a Village Panchayat?

65M7C

3rd_Social_Science_Unit_3.indd 149 04/02/2023 11:06:21

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Dad: There is a **President** (head of the Panchayat) and a **Vice President** along with **ward members** (6-15).





Iniyan: How do the Panchayat members are selected?

Dad: Village people select the President and members through the **election.** The tenure of the members of Panchayat is **five years.** The Vice President is elected by the ward members.













ACTIVITY

Let us answer

1. Write the name of your Village Panchayat President?

_____

2. How many ward members are there in your Village Panchayat?

_____



3rd_Social_Science_Unit_3.indd 150 04/02/2023 11:06:21

LET US KNOW

The **Uthiramerur** inscriptions in Kanchipuram district indicate that the Chola Kingdom followed the **Kudavolai method** to elect candidates for village administration.

Kudavolai is a traditional method of election.



Village people gathered and wrote the names of preferred candidates in palm leaves and kept them in a mud pot called **Kudam**. A child was called to pick up palm leaves one by one. The persons, whose names in palm leaves were declared elected.













ACTIVITY

Let us do



Select your class leader using the Kudavolai system.

3rd_Social_Science_Unit_3.indd 151 04/02/2023 11:06:42

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Iniyan: Dad...What are the duties of these members?

Dad: Their duty is to provide basic needs of the villagers.

The obligatory functions of the Panchayat are:

1. Providing electricity and maintaining the street lights.
2. Drilling and maintaining of village wells.
3. Providing drinking water.
4. Constructing of roads and maintaining them.
5. Setting up sewage channels.
6. Constructing small bridges.
7. Repairing Primary School buildings.
8. Providing sanitation facilities.





Iniyan: Oh! They are doing so many works. But, to do the works, they need a lot of money. What will they do for the money?



The term **Gram Swaraj** was first introduced by **Mahatma Gandhi.**



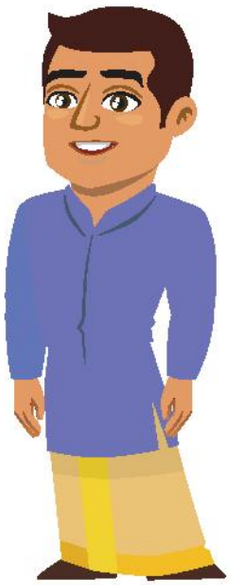
3rd_Social_Science_Unit_3.indd 152 04/02/2023 11:06:46

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Dad: Our Central and State Government provide money to the Panchayat. We pay taxes to Panchayat. Panchayat use this money for the development of the village.

Collecting tax is an obligatory function of Panchayat.

They do some **discretionary functions** too... Such as,



1. Planting trees in either sides of the roads.
2. Setting up and maintenance of public markets.
3. Setting up of gardens.
4. Establishing passenger lodgings.
5. Setting up and maintenance of play grounds.
6. Constructing library.
7. Establishing centres for informal and adult education.
8. Organising festivals in the village.
9. Maintaining the cleanliness of the village.



1. Is there any library, in your village?
2. Is there any park, in your village?
3. Is there any playground in your village?

3rd_Social_Science_Unit_3.indd 153 04/02/2023 11:06:48

Awards are given to the best performing Panchayats

An Admiring village

850 houses were built at free of cost for the people of Odanthurai Panchayat in Coimbatore. Their Panchayat attained the level of self-sufficiency to provide basic facilities. This village got the following **awards:**

1. Nirmal Purashkar Award
2. Bharat Ratna Rajiv Gandhi Environment Award





Iniyan: Dad... Will you go to the Gram Sabha meeting which will be held tomorrow?

Dad: Sure, I will go. It is important to participate in the Gram sabha meeting to discuss the village developmental plans and to take remedial measures.





Gram Sabha is the root of democracy.

Gram Sabha meeting must be held at least **six times** a year. Meeting must be conducted on the following dates:

26th January	(Republic day)
22nd March	(World Water Day)
1st May	(Labour Day)
15th August	(Independence Day)
2nd October	(Gandhi Jayanti)
1st November	(Local Governance Day)



3rd_Social_Science_Unit_3.indd 154 04/02/2023 11:06:51

Duties of Gram Sabha

1. Planning and executing village developmental programmes.
2. Verifying income and expenditure of village funds.
3. Planning to rectify the grievances of the people.

Town Panchayat

Town Panchayat as same as village Panchayat. Here the population ranges between 5000 to 30,000. The members of the Town Panchayat are elected in the same way as village Panchayat. Their tenure is five years. They fulfill the basic requirements of the people of the town.



Glossary

Discretionary : Voluntary
Executing : Perform
Obligatory : Compulsory



Recap

- Village Panchayat provides the basic facilities for the village people.
- Panchayat Raj is the three tier system.
- Collecting tax is an obligatory function of Panchayat.
- Gram Sabha meeting must be held at least six times a year.
- The members of the town Panchayat are elected in the same way as village Panchayat.

3rd_Social_Science_Unit_3.indd 155 04/02/2023 11:06:52

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EVALUATION



I. Choose the correct answer.

1. Panchayat is a _____ level government.

   a. district b. state c. village

2. _____introduced the word 'Gram Swaraj'.

   a. Kamarajar b. Mahatma Gandhi c. Nehru

3. The lower level of the three tier system is _____ Panchayat.

   a. district b. block level c. village

4. Who elects/ elect the Vice President of the Panchayat?

   a. People b. Ward members c. District Collector

5. The tenure of the members of the Panchayat is _____

   a. 15 years b. 10 years c. 5 years

II. Match the following.

1. Kudavolai	-	development of plan
2. Gram Panchayat	-	obligatory function
3. Planting trees	-	old system of election
4. Street lights	-	discretionary function
5. Gram Sabha	-	people above 500

3rd_Social_Science_Unit_3.indd 156 04/02/2023 11:06:53

III. Answer the following.

1. What is Village Panchayat?
2. Illustrate the 'Three tier system'.
3. Write any three obligatory functions of the Panchayat.
4. Write any three discretionary functions of the Panchayat.
5. When are the Gram Sabha meetings held?











FUN WITH ACTIVITY

PROJECT

VRAH7

Write the facilities which you get from your Panchayat.

3rd_Social_Science_Unit_3.indd 157 04/02/2023 11:06:53

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UNIT 4 Safety



Learning Objectives

- Understand the safety measures to avoid accidents.
- Know about Fire safety.
- Know about Road safety.
- Understand the water safety.
- Know about the electrical safety.



WEGKD

Our life is very precious and important. Accidents may occur at home, school, on the road and at other places. We have to be cautious to protect ourselves from dangers. We can be safe by knowing the safety measures and following them.

3rd_Social_Science_Unit_4.indd 158 30/01/2023 17:32:54

Reasons for the danger or accident



In our lives, there are accidents caused by **fire**, **water**, **electricity**, **vehicles**, **toxic organisms**, **sharp weapons and glassware**, **pesticides** and so on.

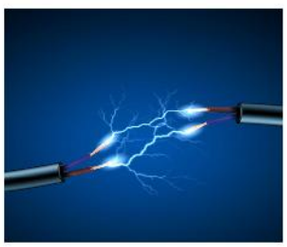
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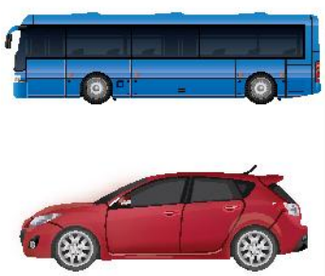
Fire



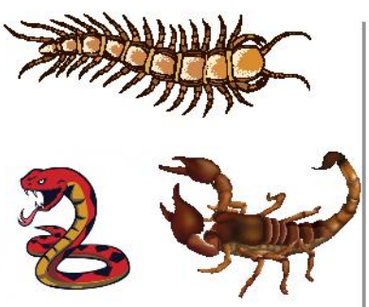
Water



Electricity



Vehicles



Toxic organisms



Pesticides



Sharp weapons and glassware

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Fire safety

'Fire is the man's marvelous creation'

- Fire can create and destroy the things.
- Fire is used in many ways in our everyday life. We should handle it carefully.

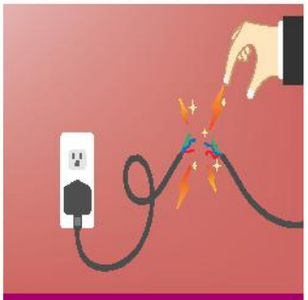


Reasons for fire accidents

Fire accidents can occur in the following ways:



Crackers and explosives



Electrical short circuit



Leakage in gas cylinders



Highly inflammable things

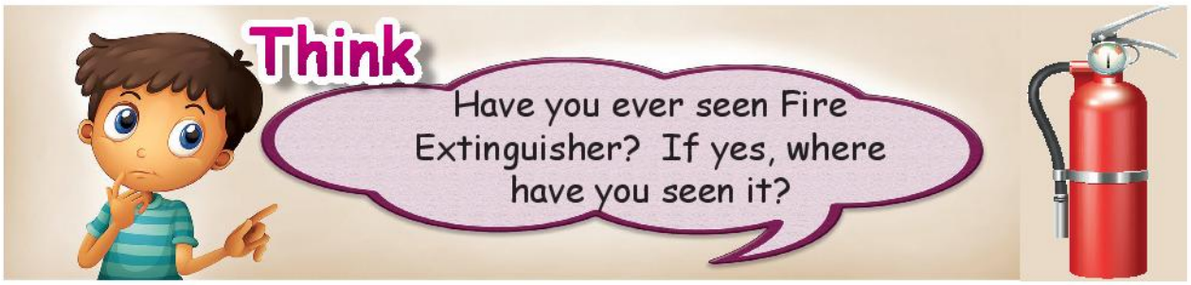


How does the **forest fire** occur? ?

Precautions to avoid fire accidents:

1. We should handle the highly inflammable things carefully.
2. It is safe to wear cotton clothes while cooking.
3. We should close the cylinder valve after cooking. If we detect leakage in gas cylinders we will open the doors and windows to ventilate our house.
4. Don't play with fire.
5. We should be cautious and careful while firing crackers and elders should be with us when we fire crackers.

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What to do during a fire accident?

1. Use fire extinguisher.
2. Execute fire warning system in buildings.
3. Cover your mouth and nose with wet cloth when the smoke spreads.
4. Use a sack to put off the fire when it spreads over the body of someone. Bring the person to any airy place.

When your clothes get fire,

- You shouldn't run.
- If you run, the fire will spread rapidly.
- Drop down and roll on the ground.



LET US KNOW

To inform any fi re accident and call fire engine, Dial **101**

What should not do?

If there is a burn in your skin,

- You shouldn't apply pen ink or coffee powder on it. (If you apply, it will infect the burn)
- Don't prick it with sharp things like needles. (If you prick it, it will infect the burn)



ACTIVITY
Let us write

How **fire** is used in our daily life?

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Water Safety

Water is very important in our daily life.

If we violate the safety rules while bathing in lake, river, waterfalls and sea, accidents will occur.





Have you ever bathed in lake or river?

If yes, with whom did you go?

?

LET US KNOW

Whenever we take bath in river or pond, we should go with elders. If we know to swim, we will go for a bath in a river or a pond.

Precautions:

1. We should not go alone to bath in water bodies.





2. Do not step into the stagnant pond.

3. Do not go beyond the danger zone.



4. Do not peep into the well. It may be deep and dangerous.



5. We have to wear life jacket when we travel in water.

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Electrical safety

Electricity has become a necessity for our lives. Times have changed these days that things don't function without electricity. It is used in houses, factories and other work places. Accidents occur when we use it carelessly.



Precautions:

1. Do not touch switches, plugs or electrical wires with wet hand.
2. Do not touch the iron box and other electrical appliances when they are switched on.
3. Do not play near electrical towers or transformers.
4. Do not climb on electrical posts.
5. Do not insert stick or any other objects into the switch boxes.
6. Do not go near the wires or electrical posts during rains.















ACTIVITY
Let us write

Write the names of **electrical appliances** which are used in your house.

_____

_____

_____

LET US KNOW

We should not pour water to extinguish the fire caused by **electrical short circuit.**

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Road safety

We must be very careful while travelling on any road. The number of vehicles going on the road is increasing. Most of the accidents are caused by carelessness.



Traffic signals for vehicles



Red	Stop
Yellow	Get ready
Green	Go

To avoid accidents,

- Follow traffic rules.
- We must obey the traffic signals.
- Do not rush on the road.
- We should wear seat belt when we travel in a car.
- We should wear helmet while riding a two wheeler.

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On the road

- Always walk on the pavement.
- Do not play on the road.
- We should look at the colours of the signal while crossing the road.

Traffic signs for the pedestrians



Red → Stop

Green → Go





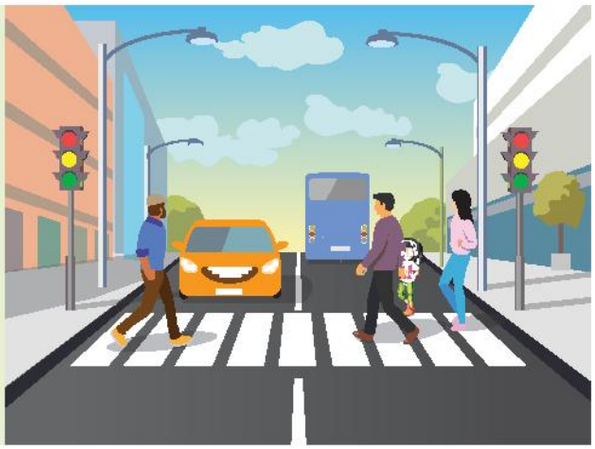
When crossing the road if there is no **traffic signal**, we have to look at the right, left and then right again.

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Zebra Crossing

Pedestrians should cross the road only at the **zebra crossing.**

The black and white lines of zebra crossing resembles the skin of a zebra.











ACTIVITY

Let us write

Write down the slogans of awareness which you have observed while travelling.





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Traffic Park

We can learn road rules in the **Traffic park**. One of the intentions of this park is to improve awareness of traffic safety among school children. There we can learn traffic rules easily.



There is a **Traffic park** near Anna Square in **Chennai.**



Wear helmet.
Save your life.



Let us obey **Traffic Rules !**

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Be safe from Toxic organisms



Dangers caused by toxic organisms:

Symptoms:

- Causes skin redness and itching.
- Causes inflammation of skin. (Inflammation occurs in places like eye lid, Ears and lips.)
- Causes headache, vomiting and giddiness.

We can give first aid and then go to the hospital.



Snake



Scorpion



Spider

Precautions:

- Do not go near bushes.
- Keep the house and surroundings clean.



Wasp

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Glasswares and Sharp weapons

- Handle the glasswares and sharp weapons carefully.
- They may cause injuries.





Glossary

Intention : Purpose
Precious : Valuable



Recap

- **Our life is precious.** If we want to live a healthy life without pain, we need to be cautious.
- Let us, obey the safety rules and live without pain.

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EVALUATION



I Choose the correct answer from the list given below.

(Water, Snake, Traffic light, Electricity, Fire)

1. If it is touched, It will be hot.
   If it is left, it will burn.
   What is it? ----------
2. I use it everyday. I see it during rainy day.
   What is it? ----------
3. I spread through lines, but I'm not a climber.
   I help to glow the bulbs.
   Who am I? ----------
4. He who doesn't have legs, slithers and wanders in jungles. Who is he? ----------
5. The one who stands on the road and guides us has three eyes of three colours. Who is he? ----------

II. Write True or false.

1. We shouldn't play in the kitchen. ( )
2. We can go to the deep part of the river to bath. ( )
3. Never touch the electrical appliances with wet hand. ( )
4. We should keep the house and surroundings clean. ( )
5. We can play with glassware. ( )

III. Answer the following questions.

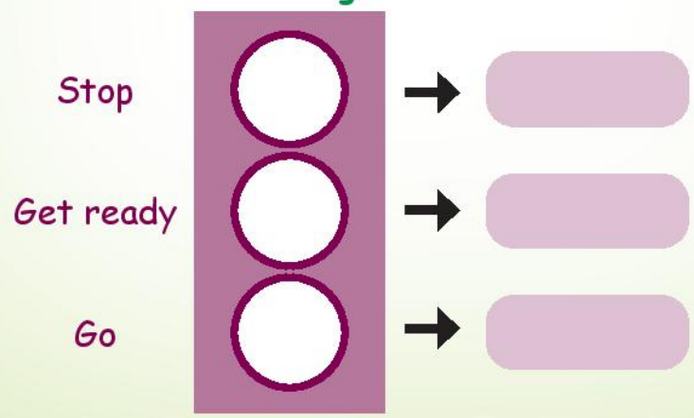
1. Write some factors that can cause accidents.
2. What should we do, if our clothes catch fire?

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3. How should we protect ourselves from accidents caused by electricity?
4. Where should we cross the road?
5. Mention the names of some toxic organisms.

IV. Let us colour.

Traffic light





FUN WITH ACTIVITY

PROJECT

TPOEH

Write any five rules of road safety.



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