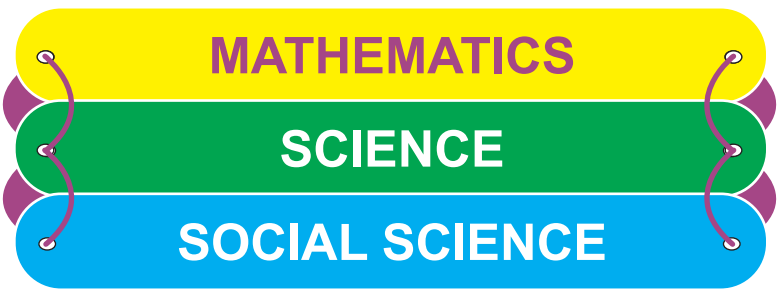
Government of Tamilnadu

STANDARD FOUR

TERM II

VOLUME 2



NOT FOR SALE

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MATHEMATICS

STANDARD FOUR

Term II

What these Icons stand for!

Practice

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PROJECT

Lab activity

1 MEASURING CAPACITY

Reeta and her sister Geetha filled water in two buckets of same capacity. They used different measures of jars to fill.

Reeta filled the bucket by 10 jars of water.

Geetha filled the bucket by 8 jars of water.

Measures cannot be accurate if we use non - standard measures.

Ramu and Somu went to a juice shop. They bought Orange juice and Mango juice.

Who has more juice?

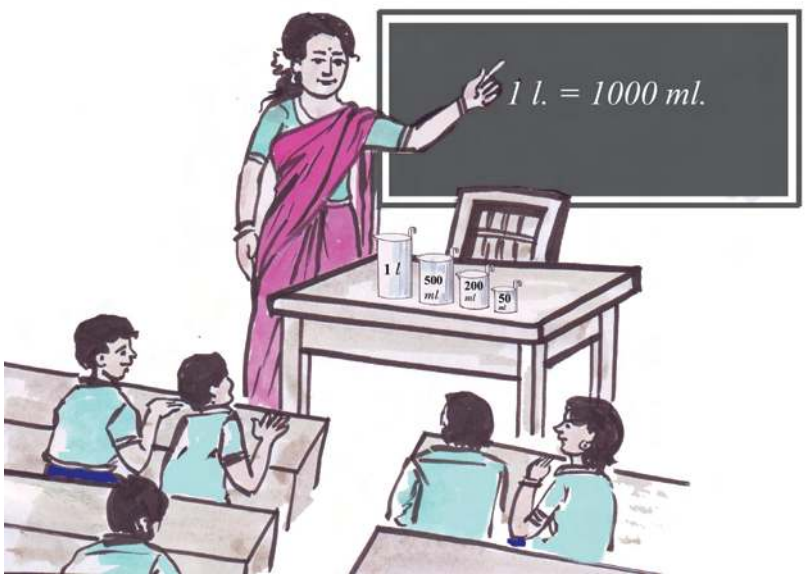
Ramu has more juice.

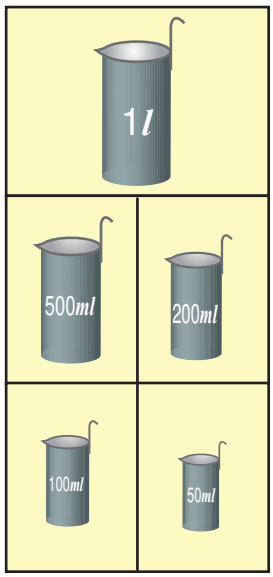
Somu may have half of it.

Millilitre and litre are the standard measures.

MATHEMATICS

Relation between litre and millilitre





Teacher : Children, can you tell me where you have seen these objects?

Sankar : I have seen these containers in the fair price shop to measure oil.

John : I have seen them with the milk man.

Teacher : Yes, You are both correct. These jars are used for measuring liquid. Can you tell me the units used for measuring liquids.

Mohan : millilitre and litre

Teacher : Gopu, please take the 500 millilitre jar and use it to fill the one litre jar with the water. Then tell me how many times you had to use the 500 millilitre jar.

Gopu : I had to fill it.

Teacher : We see that, we need two 500 millilitre jars of water to make one litre

500 millilitre + 500 millilitre = 1litre

1000 millilitre = 1 litre

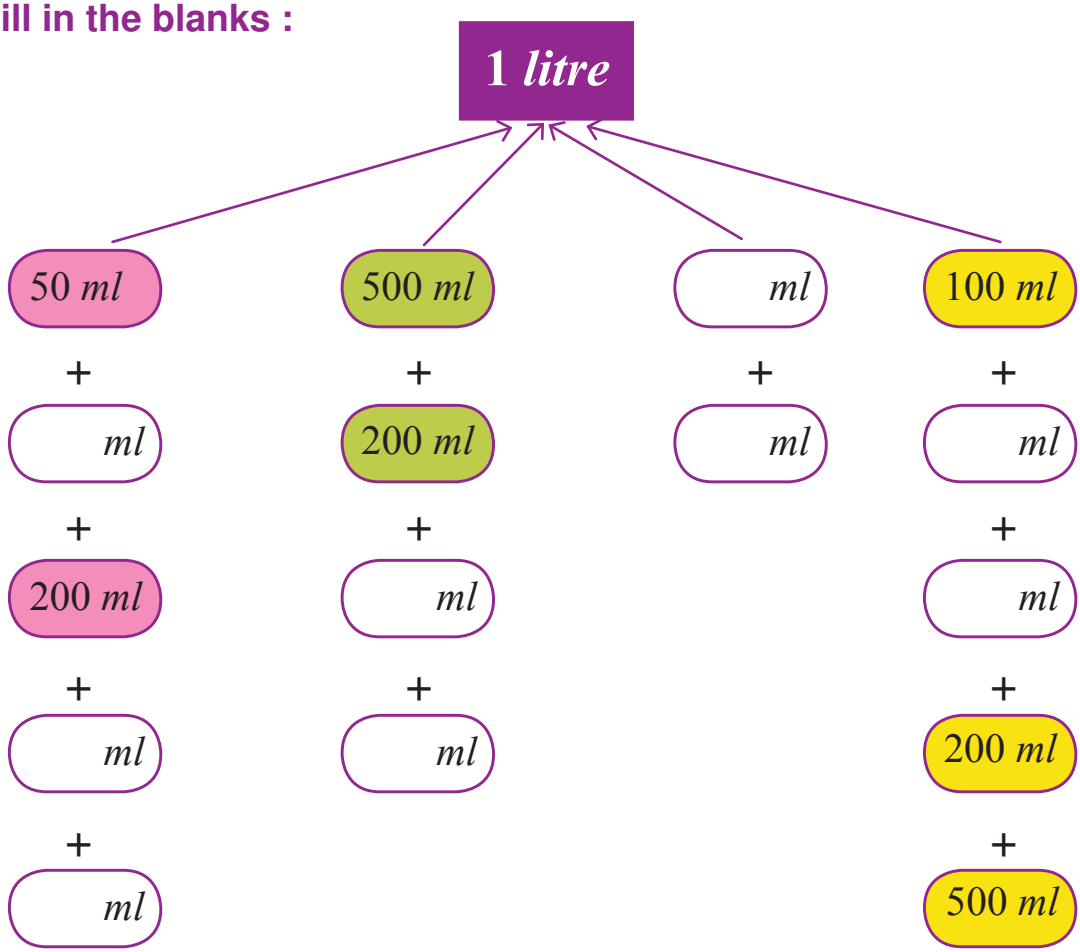
we write '*ml*' for millilitre and '*l*' for litre

½ *l* = 500*ml*

¼ *l* = 250*ml*

¾ *l* = 750*ml*

Fill in the blanks :



Water, water

The table shows the amount of water used in one day by Sriram's family of 3 persons.

Drinking	9 *l*
Cooking	12 *l*
Cleaning vessels	15 *l*
Bathing	30 *l*
Washing clothes	24 *l*
Other reasons	40 *l*
Total amount of water used for one day	*l*

PROJECT

Find the amount of water used by your family in one day?

Name of the Student .....

Total number of persons in your family .....

Drinking	*l*
Cooking	*l*
Cleaning vessels	*l*
Bathing	*l*
Washing clothes	*l*
Other reasons	*l*
Total amount of water used in one day	*l*

Addition of litre and millilitre

- 2 *l* + 450 *ml* = 2000 *ml* + 450 *ml* = 2450 *ml*
- 3 *l* + 75 *ml* = 3000 *ml* + 75 *ml* = 3075 *ml*
- 4 *l* + 5 *ml* = 4000 *ml* + 5 *ml* = 4005 *ml*

Practice

(1) Fill in the missing boxes.

1) 1 *l* =	1000 *ml*	5) 7000 *ml* =	*l*
2) 2 *l* =	*ml*	6) 4000 *ml* =	*l*
3) 6 *l* =	*ml*	7) 9000 *ml* =	*l*
4) 5 *l* =	*ml*	8) 3000 *ml* =	*l*

9) 3 *l* + 475 *ml* =	*ml*	+	*ml*	=	*ml*
10) 5 *l* + 60 *ml* =	*ml*	+	*ml*	=	*ml*
11) 7 *l* + 5 *ml* =	*ml*	+	*ml*	=	*ml*

(2) Write the correct matches of A from B.

A	B
1*l* 250*ml*	
1*l* 25*ml*	
1*l* 5*ml*	
1*l* 750*ml*	
1*l* 705*ml*	

B
1750 *ml*
1250 *ml*
1705 *ml*
1005 *ml*
1025 *ml*

Fill in the boxes using 500 *ml*, 200 *ml*, 100 *ml*, 50 *ml*.

500 *ml*	☐ + ☐ + ☐
500 *ml*	100 *ml* + 100 *ml* + 100 *ml* + 100 *ml* + 100 *ml*
700 *ml*	☐ + ☐ + ☐ + ☐
200 *ml*	☐ + ☐ + ☐
300 *ml*	☐ + ☐ + ☐ + ☐
200 *ml*	☐ + ☐ + ☐ + ☐
250 *ml*	☐ + ☐
350 *ml*	☐ + ☐ + ☐
450 *ml*	☐ + ☐ + ☐ + ☐
600 *ml*	☐ + ☐
1*l*	☐ + ☐ + ☐ + ☐

PROJECT

List out the measures
used in your home for the following items.
Milk , Juice, Buttermilk, Ghee, Coconut oil.

Addition in capacity

Add.

$25l\ 500ml + 13l\ 225ml$

	l	ml
	25	500
+	13	225
	38	725

Step 1 : Add millilitres.
Step 2 : Add litres.

Practice

1)

	l	ml
	50	100
+	29	350

2)

	l	ml
	15	175
+	13	225

3)

	l	ml
	22	327
+	13	256

4)

	l	ml
	16	200
	15	150
+	17	300

5)

	l	ml
	7	050
	12	200
+	23	500

6)

	l	ml
	43	000
	14	500
+	26	250

7)

	l	ml
	18	306
	16	054
+	14	252

8)

	l	ml
	37	150
	2	221
+	44	578

9)

	l	ml
	3	075
	19	529
+	21	275

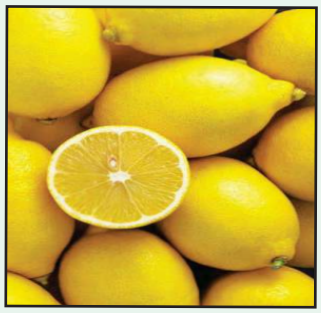
Life related problems

Shall we prepare a cold drink? it is very hot today.

The ingredients are given below.

$1l$ sharbath

$200ml$ lemon juice



$2l$ $500ml$ cold water

		l	ml
Cold water	=	2	500
Sharbath	=	1	000
Lemon Juice	=	0	200
Total	=	3	700

Total quantity of the cold drink = $3l$ $700ml$

Practice

1) These are three vessels with milk.

$17l$ $300ml$

$2l$ $100ml$

$5l$ $200ml$

★ Which vessel has more milk?

★ Which has less milk?

★ Find the total amount of milk in the three vessels.

2) The amount of milk given by a cow in three days is given below.

	l	ml
Day 1	13	500
Day 2	14	200
Day 3	12	100

Find the total milk given by the cow in three days.

3) Bama has $2l$ of buttermilk which is very sour in taste. So she add $500ml$ of water. What is the amount of buttermilk after the addition of water?

4) Jayanthi buys $1l$ of idly mix. To make dosa she adds $200ml$ of water. Find the total amount of dosa mix?

5) $200ml$ of coconut oil, $300ml$ of sesame oil and $100ml$ of castor oil are mixed to light a lamp. Calculate the total quantity of the oil mixture?

6) $50ml$ of red, $100ml$ of green and $500ml$ of white paint are mixed together. Find the total quantity of paint obtained.

7) The water used to prepare food items at a function are given below.

Food item	Quantity of water	
	l	ml
Rice	25	200
Rasam	15	150
Butter milk	10	500
Padam kheer	5	50

★ Find the total quantity of water to prepare rice and rasam.

★ How much quantity of water is needed to prepare buttermilk and padam kheer?

★ Find the total quantity of water required to prepare all food items.

Subtraction in capacity

Subtract.

$15l\ 350ml - 13l\ 225ml$

l	ml
15	350
– 13	225
2	125

Step 1 : Subtract $225ml$ from $350ml$.

Step 2 : Subtract $13l$ from $15l$.

Life related problem

Find the quantity of water used for soaking the clothes.

Water in a pot

The clothes are soaked.

Remaining water

The quantity of water	=	20 l
Remaining water	=	– 11 l
Water used for soaking the clothes	=	9 l

Practice

1)

l	ml
27	875
– 18	618

2)

l	ml
35	950
– 23	286

3)

l	ml
56	357
– 15	238

4) Find the remaining mango juice when 200ml is taken from 1l 500 ml of mango juice.

	l	ml
	1	500
–	0	200

Remaining mango juice = _____

5) Raja and his friends went to an oil shop. The quantity of oil bought by them are given below.

S. No	Name	Sun flower oil	Groundnut oil	Gingelly oil	Mustard oil	Coconut oil
		l ml	l ml	l ml	l ml	l ml
1	Raja	5 000	1 300	3 000	0 100	0 050
2	Elizabeth	8 100	0 250	1 100	0 300	0 100
3	Nithish	1 200	0 050	0 250	4 150	2 000
4	Revathi	4 150	3 100	2 600	0 050	--
5	Rajeswari	2 250	4 050	4 050	0 200	0 400

⇨ Find the total quantity of oil bought by Elizabeth.

⇨ Calculate the total quantity of sunflower oil bought from the shop?

⇨ Who bought more mustard oil?

⇨ Which oil was bought most?

⇨ How much more groundnut oil did Raja buy than Nithish?

Lab activity

Fill in the table.

S. No	Things	Number of times	Approximate value in l or ml	Correct value in l or ml
1.		20		
2.		5		
3.		3		
4.		1		
5.		2		
6.		1		
7.		20		
8.		1		
9.		4		

REVISION

Fill in the blanks.

1) $7l + 500ml$ = _____ ml

2) $4l + 65ml$ = _____ ml

3) $8l + 5ml$ = _____ ml

4) $4l\ 890ml$ = _____ ml

5) $6l\ 856ml$ = _____ l + _____ ml

6) $3l\ 567ml$ = _____ l + _____ ml

7) $4l\ 890ml$ = _____ l + _____ ml

Do the sums.

1)

l	ml
7	075
+ 75	354

2)

l	ml
16	305
73	355
+ 55	089

3)

l	ml
27	005
86	290
+ 73	605

4)

l	ml
82	235
– 28	150

5)

l	ml
73	589
– 65	254

6)

l	ml
98	439
– 39	315

7) A drum contains $54l\ 250ml$ of varnish and another drum contains $75l\ 650ml$. What is the total capacity?

8) A bucket contains $15l\ 20ml$ water and another bucket contains $12l\ 300ml$. What is the total quantity?

9) A curd vendor has $89l\ 500ml$ of curd. If he sells $39l\ 250ml$, how much is left with him?

2 MULTIPLICATION AND DIVISION

MULTIPLICATION

In a World Cup Cricket Match, 2007, Yuvaraj Singh hit each ball for a six runs in the over.

Shall we calculate the runs taken by him in the over?

Number of runs taken in

one ball	=	6	= 1 × 6 = 6
two balls	=	6 + 6	= 2 × 6 = 12
three balls	=	6 + 6 + 6	= 3 × 6 = 18
four balls	=	6 + 6 + 6 + 6	= 4 × 6 = 24
five balls	=	6 + 6 + 6 + 6 + 6	= 5 × 6 = 30
six balls (one over)	=	6 + 6 + 6 + 6 + 6 + 6	= 6 × 6 = 36

Multiplication is the short form of repeated addition

6th table

1 × 6 = 6	6 × 6 = 36
2 × 6 = 12	7 × 6 = 42
3 × 6 = 18	8 × 6 = 48
4 × 6 = 24	9 × 6 = 54
5 × 6 = 30	10 × 6 = 60

6 notebooks are needed for one student. How many notebooks will be needed for 7 students?

Solution:

To find the total notebooks we have to multiply 7 by 6. 7 × 6 = 42

42 notebooks will be needed for 7 students

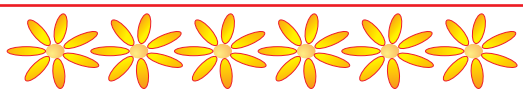
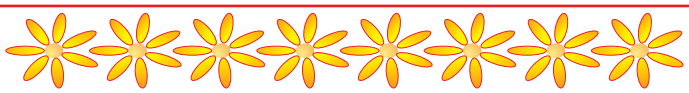
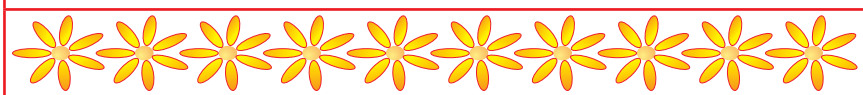
Practice

1) 3 × 6 = ____ 2) 4 × 6 = ____ 3) 5 × 6 = ____

4) If a shirt has 6 buttons, how many buttons will be in 8 shirts?

5) Find the number of fans in 9 houses if each house has 6 fans.

Complete the 7 table

Flower has 7 petals. 	1 × 7 = 7
	2 × 7 = 14
	3 × 7 = 21
	
	
	6 × 7 = 42
	
	8 × 7 = 56
	
	10 × 7 =70

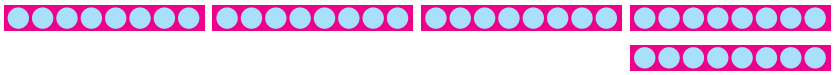
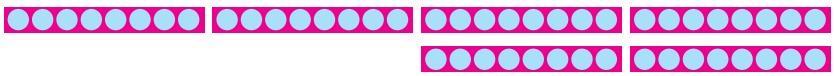
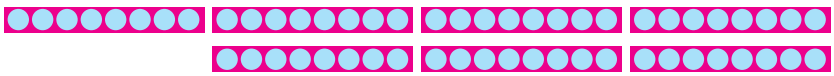
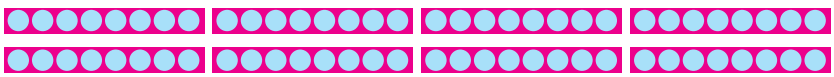
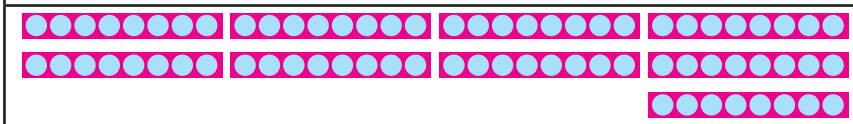
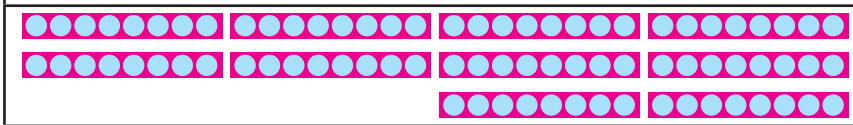
Practice

1) 4 × 7 = ____ 2) 7 × 7 = ____ 3) 9 × 7 = ____

4) A box contains 7 pencils. How many pencils are there in 5 boxes?

5) One week has 7 days. Calculate the numbers of days in 8 weeks.

Complete the 8 table

	1 × 8 = 8
	2 × 8 = 16
	3 × 8 = 24
	
	5 × 8 = 40
	
	7 × 8 = 56
	
	
	10 × 8 = 80

Practice

1) 4 × 8 = ____ 2) 6 × 8 = ____ 3) 9 × 8 = ____

4) Number of rods in a window is 8. Find the number of rods in 8 windows.

5) Find the number of pillars for 7 buildings if each building has 8 pillars.

Complete the 9 table.

9	= 1 × 9 = 9
9+9	= 2 × 9 = 18
9+9+9	= _____
9+9+9+9	= 4 × 9 = 36
9+9+9+9+9	= _____
9+9+9+9+9+9	= 6 × 9 = 54
9+9+9+9+9+9+9	= _____
9+9+9+9+9+9+9+9	= 8 × 9 = 72
9+9+9+9+9+9+9+9+9	= _____
9+9+9+9+9+9+9+9+9+9	= 10 × 9 = 90

Practice

1) 4 × 9 = ____ 2) 7 × 9 = ____ 3) 8 × 9 = ____

4) A Kho - Kho team has 9 persons. How many persons are there in 6 teams?

5) Number of idlies that can be prepared in one one idly plate is 9. How many idlies can be prepared in 9 idly plates?

Complete the 10 table.

From the tables 1 to 9 we know the following.

10 × 1 = 10
10 × 2 = 20
10 × 3 = 30
10 × 4 = 40
10 × 5 = 50
10 × 6 = 60
10 × 7 = 70
10 × 8 = 80
10 × 9 = 90

Change to 10 table.

1 × 10 = 10
2 × 10 = 20
_____
_____
_____
_____
_____
_____
_____
10 × 10 =100

MATHEMATICS

Multiplication by 10, 100, 1000

Fill in the boxes

1) 5 × 10 = 50

2) 60 × 10 = ____

3) 705 × 10 = ____

4) 500 × 10 = ____

5) 7 × 100 = 700

6) 40 × 100 = ____

7) 66 × 100 = ____

8) 3 × 1000 = 3000

9) 8 × 1000 = ____

10) 9 × 1000 = ____

When a number is multiplied by 10, 100, 1000, it is enough to write one zero, two zeros, three zeros respectively after that number.

Multiplication by 1

5 × 1 = 5
48 × 1 = 48
760 × 1 = 760

The product of one and any number is the number itself.

Multiplication by 0

7 × 0 = 0
50 × 0 = 0
384 × 0 = 0

The product of zero and any number is zero.

Order of multiplication

1 × 2 = 2 × 1
27 × 5 = 5 × 27
768 × 4 = 4 × 768

The product of two numbers does not change, if we interchange the order of numbers.

Fill in the blanks.

7 × 8 = 56 = 8 × 7
5 × 9 = 45 = 9 × 5
10 × 7 = 70 = 7 × 10

7 × 6 = ____ = 6 × 7
____ = 72 = 8 × 9
9 × 9 = 81 = ____

Multiplication - Easy methods

Multiplication by 30, 50 ... etc.

1. Multiply 245 by 30

$245 \times 30 = 245 \times (3 \times 10)$

$= (245 \times 3) \times 10$

$= 735 \times 10$

$= 7350$

$245 \times 30 = 7350$

245		
x 3		0
735		0

2. Multiply 36 by 50

$36 \times 50 = 36 \times (5 \times 10)$

$= (36 \times 5) \times 10$

$= 180 \times 10$

$= 1800$

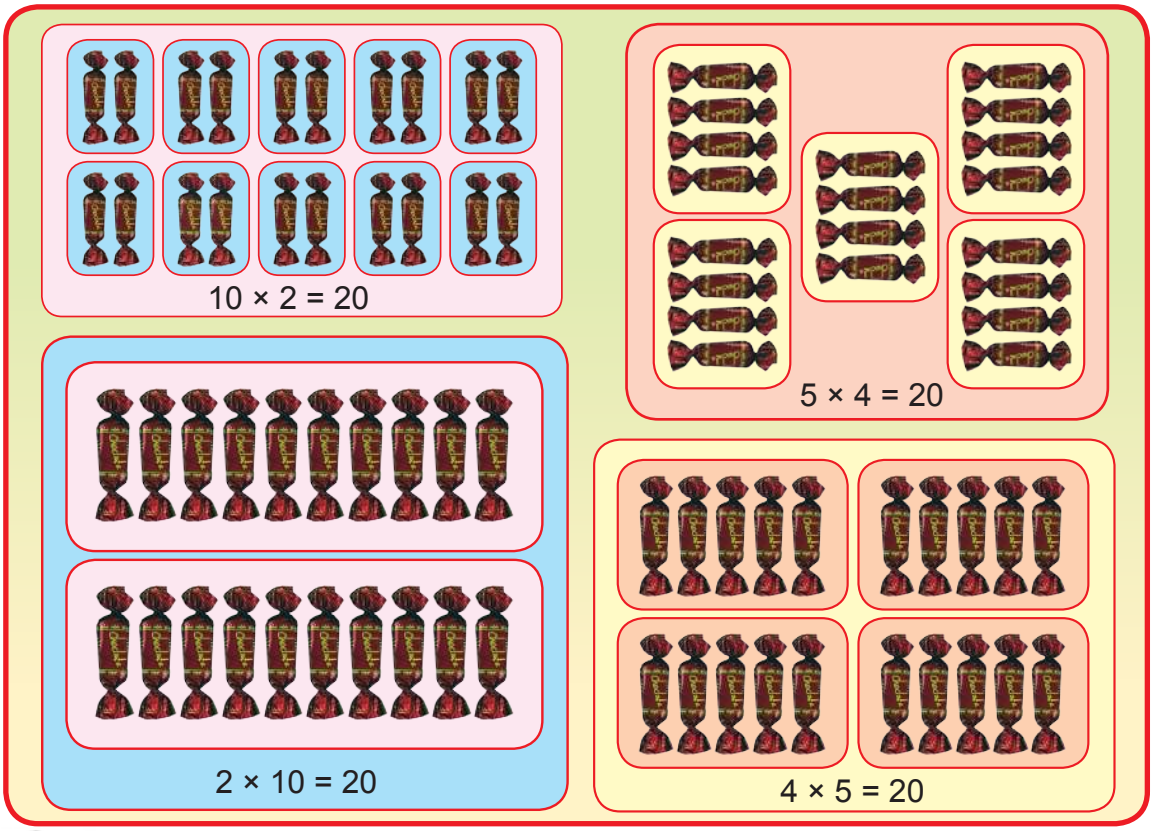
36		
x 5		0
180		0

To multiply by a number 30, 50. etc first multiply the number by the non - zero digit of the multiplier and put as many zeros as there are in the multiplier to the right of the result.

Multiply

1. 27 x 40
2. 34 x 80
3. 65 x 90
4. 452 x 70
5. 535 x 60
6. 791 x 20

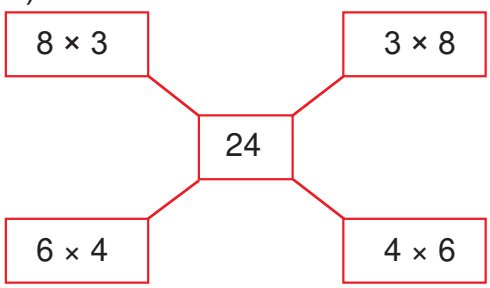
Srinath arranged 20 chocolates in the following ways.



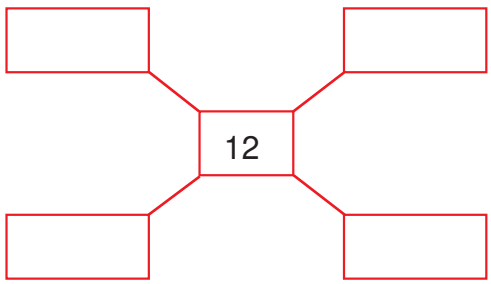
Practice

Complete the chart for the following numbers.

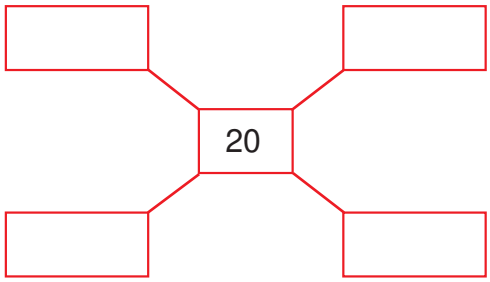
1)



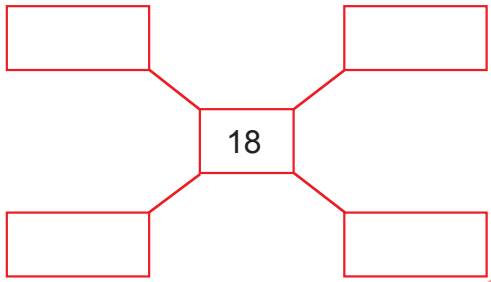
2)



3)



4)



Multiplication of two digit numbers by one digit number

If one class has 34 students, find the number of students in 6 classes.

Solution: Number of students in one class = 34

Number of students in 6 classes = 34 × 6

H	T	O
	(2)	
	3	4
	×	6
		4

Step 1:

4 × 6 = 24 ones

Write 4 in the 'ones' place

and carry (2) to the 'tens' place.

H	T	O
	(2)	
	3	4
	×	6
2	0	4

Step 2:

3 × 6 = 18 tens

Add 18 tens and (2) tens.

18 + (2) = 20

Write 0 in tens place and

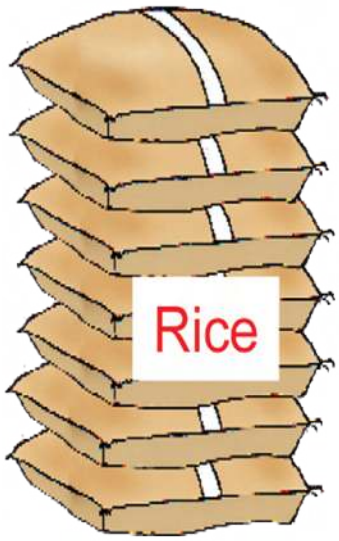
2 in hundreds place.

Number of students in 6 classes = 204

MATHEMATICS

Multiplication of 3 digit numbers by one digit number

The cost of a rice bag is ₹ 436. Find the cost of 7 rice bags.



Solution:

Cost of a rice bag = ₹ 436

Cost of 7 rice bags = ₹ 436 × 7

Th	H	T	O
	(2)	(4)	
	4	3	6
		×	7
3	0	5	2

Steps :

- 6 × 7 = 42

  write 2 in ones place and carry 4 to tens place
- 3 × 7 = 21, 21 + 4 = 25

  write 5 in tens place and carry 2 to hundreds place
- 4 × 7 = 28, 28 + 2 = 30

  write 0 in hundreds place and 3 in thousands place.

Cost of 7 rice bags = ₹ 3052

Practice

1) 67 × 6	2) 95 × 5	3) 47 × 8	4) 87 × 5
5) 897 × 6	6) 725 × 7	7) 506 × 7	8) 923 × 8
9) 666 × 8	10) 460 × 9	11) 292 × 5	12) 788 × 9

13) A pearl necklace has 52 pearls. How many pearls are there in 7 necklaces?

14) Number of roses needed for a garland is 72.
Calculate the number of roses needed for 9 garlands.

15) 485 sugarcane bundles are loaded in a cart. How many bundles are loaded in 7 carts?

16) The cost of an iron box is ₹ 565. Find the cost of 8 iron boxes.

Multiplication of two digit numbers by two digit numbers

A box contains 48 apples. How many apples are there in 56 boxes?

Solution: Number of apples in a box = 48

Number of apples in 56 boxes = 48 × 56

We can write 56 = 50 + 6

Th	H	T	O
		4	8
	×	5	6
	2	8	8
2	4	0	0
2	6	8	8

Step 1	Step 2	Step 3
4 8	4 8	2 8 8
× 6 ones	× 5 0 ones	+ 2 4 0 0
2 88 ones	2 4 0 0 ones	2 6 8 8

Number of apples in 56 boxes = 2688

MATHEMATICS

Another way

Th	H	T	O
	(4)	(4)	
		4	8
	×	5	6
	2	8	8
2	4	0	0
2	6	8	8

Step 1

Multiply ones by ones

8 × 6 = (4) 8

Multiply tens by ones

4 × 6 = 24

24 + (4) = 28

48 × 6 = 288

Step 2

Multiply ones by tens

8 × 5 = (4) 0

Multiply tens by tens

4 × 5 = 20

20 + (4) = 24

48 × 5 = 2400

Step 3 288 + 2400 = 2688

Number of apples in 56 boxes = 2688.

Practice

1) 59 × 43 2) 58 × 56 3) 95 × 60 4) 78 × 66 5) 38 × 71

6) 92 × 76 7) 60 × 88 8) 54 × 90 9) 70 × 92 10) 65 × 98

11) In a marriage hall 28 persons are seated in a row. How many persons are seated in 36 rows?

12) Bus fare for a person from Tambaram to Cuddalore is ₹ 93. Find the bus fare for 43 persons.

13) A Mini van is loaded with 44 onion bags. How many onion bags are loaded in 37 Mini vans?

14) One quire of paper contains 24 sheets. How many sheets are there in 36 quires?

15) How many hours are there in the month of July?

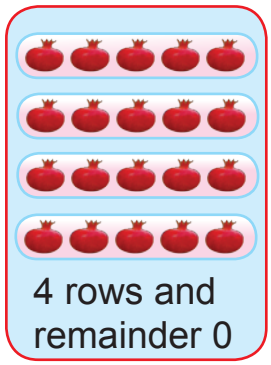
Puzzle

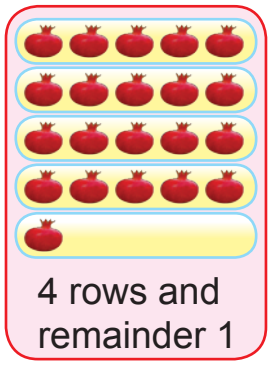
I am a two digit number. I lie in between 40 and 50. I am an even number. I appear in sixth and seventh multiplication table. Who am I?

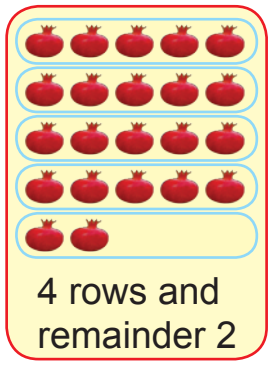
DIVISION

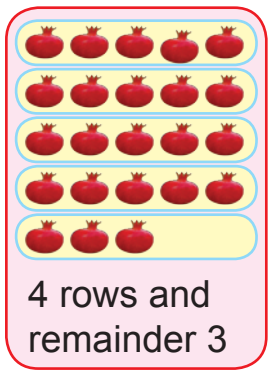
Sharing

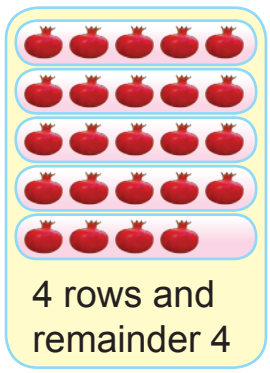
There are 20, 21, 22, 23, 24 and 25 pomegranates in each box. In how many rows they can be arranged if each row has 5 pomegranates?

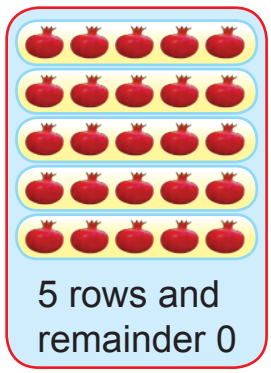

4 rows and remainder 0


4 rows and remainder 1


4 rows and remainder 2


4 rows and remainder 3

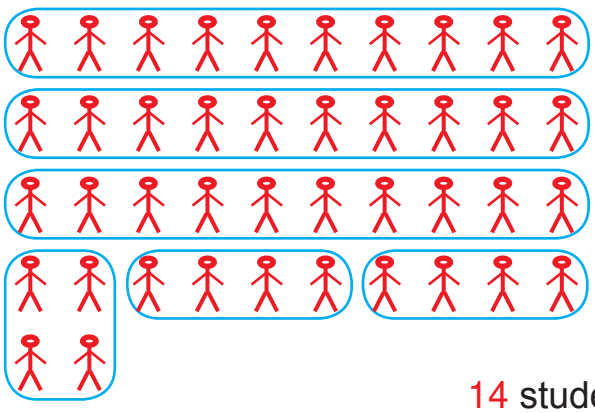

4 rows and remainder 4


5 rows and remainder 0

Arrange in groups

If 42 students are to be grouped equally into 3 teams, how many students will be there in each team?

Divide : 42 ÷ 3



42 = 30 + 12

10 + 4 = 14

3 | 30 + 12

30 + 12

0

Quotient = 14
Remainder = 0

14 students will be there in each team.

Division of three digit number by a one digit number

Division without remainder

Divide 875 by 7

```
    1 2 5
  ┌──────
7 │ 8 7 5
    7 ↓
  ┌──────
    1 7
    1 4 ↓
  ┌──────
      3 5
      3 5
  ┌──────
        0
```

Step 1 : Take 8 hundreds. Divide 8 by 7.
Quotient =1 and remainder = 1

Step 2 : Take 17 tens
Divide 17 by 7. Quotient = 2 and remainder = 3

Step 3 : Take 35 ones
Divide 35 by 7. Quotient = 5 and remainder = 0

875 ÷ 7 = 125

Quotient = 125, Remainder = 0

Find the number of plates that are distributed equally to 9 hostels if the total number of plates are 963.

Solution : Total numbers of plates distributed = 963
Number of hostels = 9
Number of plates distributed to each hostel = 963 ÷ 9

```
    1 0 7
  ┌──────
9 │ 9 6 3
    9 ↓ ↓
  ┌──────
      6 3
      6 3
  ┌──────
        0
```

Step 1 : Take 9 hundreds.
9 ÷ 9 = 1.

Step 2 : Take 6 tens.
6 cannot be divided by 9.
So, put 0 tens in quotient's place.
Now take 63 ones.
63 ÷ 9 = 7, remainder 0.

107 plates are distributed to each hostel

Division with remainder

Divide 657 by 8

```
      8 2
   ┌──────
8  │ 6 5 7
     6 4 ↓
   ──────
       1 7
       1 6
   ──────
         1
```

Step 1 : Take 6 hundreds. 6 cannot be divided by 8. So take 65 tens. Divide 65 by 8. Quotient = 8 and remainder = 1

Step 2 : Take 17 ones. Divide 17 by 8. Quotient = 2 and remainder = 1

Quotient = 82 Remainder = 1

Practice

1) 575 ÷ 5
2) 336 ÷ 6
3) 456 ÷ 8
4) 658 ÷ 7
5) 807 ÷ 6
6) 690 ÷ 7
7) 981 ÷ 8
8) 829 ÷ 9
9) An electrician fixed 4 bulbs in a room. In how many rooms can 216 bulbs be fixed by him?
10) 9 saplings are planted in a row. In how many rows are 873 saplings planted?

Division of 4 digit number by one digit number

Division without remainder

Divide 7847 by 7

Step 1 : Take 7 thousands. Divide 7 by 7. Quotient = 1 and remainder = 0

Step 2 : Take 8 hundreds. Divide 8 by 7. Quotient = 1 and remainder = 1

Step 3 : Take 14 tens. Divide 14 by 7. Quotient = 2 and remainder = 0

Step 4 : Take 7 ones. Divide 7 by 7. Quotient =1 and remainder = 0

```
        1 1 2 1
   ┌──────────
7  │ 7 8 4 7
     7 ↓
   ──────
       8
       7 ↓
   ──────
       1 4
       1 4 ↓
   ──────
           7
           7
   ──────
           0
```

Quotient = 1121, Remainder = 0

MATHEMATICS

8 children collected 4904 shells from the sea shore. If the shells are equally shared, how many shells will each one get?

Solution :

Total number of shells = 4 9 0 4

Number of children = 8

Number of shells for each child = 4 9 0 4 ÷ 8

```
      6 1 3
   ---------
8 | 4 9 0 4
    4 8
   ---------
      1 0
        8
   ---------
        2 4
        2 4
   ---------
          0
```

Step 1 : Take 4 thousands. 4 cannot be divided by 8. So take 49 hundreds. Divide 49 by 8. Quotient = 6 and remainder =1

Step 2 : Take 10 tens. Divide 10 by 8. Quotient = 1 and remainder = 2.

Step 3 : Take 24 ones. Divide 24 by 8. Quotient =3 and remainder = 0.

Each child will get 613 shells.

Division with remainder

Divide 7004 by 6

Step 1 : Take 7 thousands. Divide 7 by 6.
Quotient = 1 and remainder = 1.

Step 2 : Take 10 hundreds. Divide 10 by 6.
Quotient = 1 and remainder = 4

Step 3 : Take 40 tens. Divide 40 by 6.
Quotient = 6 and remainder = 4

Step 4 : Take 44 ones. Divide 44 by 6.
Quotient = 7 and remainder = 2.

```
      1 1 6 7
   -----------
6 | 7 0 0 4
    6
   -----------
      1 0
        6
   -----------
        4 0
        3 6
   -----------
          4 4
          4 2
   -----------
            2
```

Check : 1167 × 6 = 7002
adding the remainder 2
7002 + 2 = 7004

Quotient = 1167
Remainder = 2

Divide 9805 by 8

```
   1 2 2 5
8 | 9 8 0 5
    8
    ---
    1 8
    1 6
    ---
      2 0
      1 6
      ---
        4 5
        4 0
        ---
          5
```

1 x 8 = 8

2 x 8 = 16

2 x 8 = 16

5 x 8 = 40

Quotient = 1225
Remainder = 5

Divide 5567 by 9

```
     6 1 8
9 | 5 5 6 7
    5 4
    ---
      1 6
      9
      ---
        7 7
        7 2
        ---
          5
```

6 x 9 = 54

1 x 9 = 9

8 x 9 = 72

Quotient = 618
Remainder = 5

Practice

1) 5232 ÷ 6 2) 8540 ÷ 7 3) 4624 ÷ 8 4) 2340 ÷ 9

5) 8348 ÷ 6 6) 6205 ÷ 7 7) 3426 ÷ 8 8) 3352 ÷ 9

9) 6 students can be seated in a bench. How many benches are required for 6264 students?

10) A six storey building has 2292 rooms. If every floor has the same number of rooms, how many rooms are there on each floor?

11) 7 containers have 7630 mugs of water. How many mugs of water are there in one container?

Observe and fill in the blanks.

42 ÷ 6 = 7	56 ÷ 7 = _____	81 ÷ 9 = _____
420 ÷ 6 = 70	560 ÷ 7 = _____	810 ÷ 9 = _____
4200 ÷ 6 = 700	5600 ÷ 7 = _____	8100 ÷ 9 = _____

Observe the following pictures and frame problems

Bus fare for one person is ₹ 96. Find the fare for 5 persons.

Vegetable and Fruit stall

Onion	1kg	₹ 15
Potato	1kg	₹ 25
Tomato	1kg	₹ 12
Drumstick	1kg	₹ 30
Apple	1kg	₹ 80
Banana	1	₹ 3

Problems

1.

2.

3.

4.

Total cost ₹ 132

Problem

Cost of 6 soap cakes are ₹ 132. What is the cost of a soap cake?

Total cost ₹ 88

Problem

Total cost ₹ 500

Problem

Estimation in multiplication

A tourism company collected ₹ 85 per head for a field trip. Estimate the amount collected from 27 persons.

		Actual amount	Estimated amount
Amount per head	=	₹ 85	₹ 90
Amount for 27 persons	=	₹ 85 × 27	₹ 90 × 30
		595	00
		170	270
Amount for 27 persons	=	₹ 2295	₹ 2700

Difference between estimated amount and actual amount = ₹ 2700 − ₹ 2295

Difference = ₹ 405

Practice

A person delivers 92 newspapers in a day. Estimate the number of newspapers that he delivers in 28 days?

Estimate and calculate.

Numbers	Actual value	Estimated value	Difference
45 × 12	540	50 × 10 = 500	40
92 × 18			
26 × 22			
33 × 37			

Multiply.

1) 62 × 4
2) 35 × 7
3) 42 × 6
4) 89 × 8
5) 360 × 5
6) 402 × 6
7) 237 × 8
8) 685 × 9
9) 40 × 27
10) 30 × 70
11) 81 × 44
12) 92 × 53
13) The cost of a toothpaste packet is ₹ 26. Find the cost of 48 tooth paste packets?
14) A lorry is loaded with 6 cars. How many cars can be loaded in 450 lorries?

Divide.

1) 72 ÷ 4
2) 80 ÷ 5
3) 98 ÷ 6
4) 88 ÷ 8
5) 654 ÷ 5
6) 342 ÷ 6
7) 530 ÷ 7
8) 632 ÷ 8
9) 458 ÷ 9
10) 8505 ÷ 5
11) 5437 ÷ 6
12) 6027 ÷ 7
13) If 6 notebooks have 9120 lines, how many lines are there in a notebook?
14) If 9 ice cream cups are placed in a tray, how many trays are needed for 504 ice cream cups?
15) Find the quotient and remainder for the following divisions.
    1. 2519 ÷ 1
    2. 2519 ÷ 2
    3. 2519 ÷ 3
    4. 2519 ÷ 4
    5. 2519 ÷ 5
    6. 2519 ÷ 6
    7. 2519 ÷ 7
    8. 2519 ÷ 8
    9. 2519 ÷ 9

3 CALCULATING TIME

Two friends studying in different schools are conversing with each other.

At what time does your school start?

My school starts at 9 o' clock. What about you?

My school starts at 9:10. How do you know what time it is?

I look the wall clock.

My grandfather looks at the sun and tells the time.

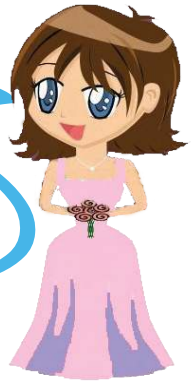
I use my wrist watch.

Look at the clock. It has two hands. One is long and the other one is short.

Yes, the long hand shows the minute and the short hand shows the hour.

What is the time now?

It is 3 o' clock because the minute hand is at 12 and the hour hand is at 3.



Hour and minute are standard units for calculating time.

Practice

Look at the clock and write the time.

1)  _____ o' clock

2)  _____ o' clock

3)  _____ o' clock

4)  _____ o' clock

5)  _____ o' clock

6)  _____ o' clock

MATHEMATICS

Hours and minutes

Look at the clock. The minute hand is at 1 and the hour hand is at 3.

Yes, now the time is 5 minutes past 3 or three-five or 3:05.

Look at the clock. The minute hand is at 2 and the hour hand lies between 3 and 4. Is it 10 minutes past 3?

Yes, we write it as three - ten or 10 minutes past 3 or 3:10

Can you help me to read the clock?

Oh, sure! look here.

Quarter of an hour	= $\frac{1}{4}$	hour = 15 minutes
Half of an hour	= $\frac{1}{2}$	hour = 30 minutes
Three - quarter of an hour	= $\frac{3}{4}$	hour = 45 minutes

When the minute hand shows 3, the time is 15 minutes past 3 or quarter past 3 or three - fifteen.
It is written as **3:15**.

When the minute hand shows 6, the time is 30 minutes past 3 or half past 3 or three - thirty.
It is written as **3:30**.

When the minute hand shows 9, the time is 45 minutes past three or 15 minutes to four or three - forty five.
It is written as **3:45**.

When the minute hand moves from one number to the next number, it means 5 minutes have passed.
Minute hand takes 60 minutes to complete one rotation. That is one hour. **So, 1 hour = 60 minutes.**

Practice

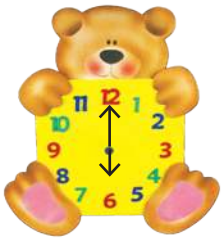
See the clock and write the time.

1:20

Lab activity

Fill in the blanks to show your daily activities. Draw the hour and minute hands on the clock faces.

1) I get up at 6 o' clock



2) I take bath at _____

3) My break fast time is _____

4) I go to school at _____

5) My lunch time is _____

6) My school gets over at _____

7) My evening play time is ____

8) My study time is ____

Time with a.m and p.m

In the above pictures both the clock shows 6 o'clock only.

One clock shows 6 o' clock in the morning and the other clock shows 6 o' clock in the evening.

6 o' clock in the morning is 6 anti meridian.

6 o' clock in the evening is 6 post meridian.

We can write anti meridian as a.m. and post meridian as p.m.

12 o' clock at night is 12 midnight.

12 o' clock in the day is 12 midday or noon.

When it is exactly 12 noon or 12 midnight it is not mentioned with a.m. or p.m.

Day Chart



Midnight 12 o' clock to Noon 12 o' clock to Midnight 12 o' clock

a.m p.m

Midnight 12 o' clock to Noon 12 o' clock

Noon 12 o' clock to Midnight 12 o' clock

12 hours → 24 hours ← 12 hours

24 hours → 1 day

1 day = 24 hours

Practice

Write time using a.m. or p.m.

1) 10:30 in the night is 10:30 p.m.
2) 7:40 in the night is _____
3) 6:15 in the evening is _____
4) 3:30 in the morning is _____
5) 8:30 in the morning is _____
6) 9:00 in the morning is _____
7) 1:30 in the afternoon is _____
8) 2:45 in the afternoon is _____

Duration of daily activities

Sundar is studying in class IV. He gets up at 6 o' clock in the morning. He goes to school at 8.30 a.m. and comes back home at 5 o' clock in the evening. He plays for some time and sits to study. He goes to bed at 9 0' clock in the night.

Can you find the duration of his daily activities?



Sundar gets up at 6 o' clock in the morning and then he goes to school at 8:30 a.m.

Duration between 6:00 a.m to 8:30 a.m is **2 hours 30 minutes.**

Minute can be written as **min.** and

hour can be written as **hr.** .

1) First period starts at 9:30 a.m, and duration of one period is an hour. The first period gets over at _____a.m.

2) Morning session gets over by 12:40 p.m.
Duration of the morning session is _____ hr _____ min.

3) Afternoon session starts at 2:00 p.m.
How long is the lunch break?_____ hr _____ min.

4) School gets over by 4:10 p.m.
Duration of the afternoon session is _____ hr ____min.

5) Sundar studies from 6:30 p. m to 8:30 p.m. Duration of his study time is _____ hrs.

CALENDAR

2013

January

Su	Mo	Tu	We	Th	Fr	Sa
		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

Su	Mo	Tu	We	Th	Fr	Sa
					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		

March

Su	Mo	Tu	We	Th	Fr	Sa
					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						

April

Su	Mo	Tu	We	Th	Fr	Sa
	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				

May

Su	Mo	Tu	We	Th	Fr	Sa
			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	

June

Su	Mo	Tu	We	Th	Fr	Sa
						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						

July

Su	Mo	Tu	We	Th	Fr	Sa
	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			

August

Su	Mo	Tu	We	Th	Fr	Sa
				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

September

Su	Mo	Tu	We	Th	Fr	Sa
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					

October

Su	Mo	Tu	We	Th	Fr	Sa
		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		

November

Su	Mo	Tu	We	Th	Fr	Sa
					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

December

Su	Mo	Tu	We	Th	Fr	Sa
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				

The calendar shows days of the weeks and months of the year. We can find date of a particular day of a particular month from it.

Look at the calendar and write down the names of the months.

Months having 31 days	Months having 30 days

February month has _____ days.

Practice

Look at the month of May and answer the following questions.

May 2013						
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	

1) How many Mondays are there in this month? _____

2) How many Sundays are there in this month? _____

3) Which celebration falls on 1st May? _____

4) Mention the dates that fall on Friday. _____

5) Write the first day of this month. _____

6) Name the last day of this month. _____

Months, weeks and days in the year 2013

Fill in the boxes.

Name of the month	Number of days in the month	Number of weeks and days
January	31	4 weeks 3 days
February	28	4 weeks 0 day
March	31	4 weeks 3 days
April	30	4 weeks 2 days
May	31	☐ weeks ☐ days
June	30	☐ weeks ☐ days
July	31	☐ weeks ☐ days
August	31	☐ weeks ☐ days
September	30	☐ weeks ☐ days
October	31	☐ weeks ☐ days
November	30	☐ weeks ☐ days
December	31	☐ weeks ☐ days
Total	365	48 weeks 29 days

1 Week = 7 days

48 weeks + 29 days = 48 weeks + 28 days + 1 day
= 48 weeks + 4 weeks + 1 day
= 52 weeks and 1 day

Approximately

1 month = 4 weeks 1 year = 52 weeks

An ordinary year = 365 days

A leap year = 366 days

In a leap year February has 29 days.

Normally a leap year comes once in four years.

Number of days between any two given dates

How many days are there to my birthday?

Tell me your date of birth and today's date.

My date of birth is 12th August and today is 15th July.

How many days are there from 15th July to 31st July?

17 days.
(15,16,17.....31)

How many days are there from 1st August to 12th August?

12 days.

What is the total number of days.

In July 17 days and in August 12 days. So 29 days to go.

Count the number of days from 13th April to 3rd June.

April _____	18 days	
May _____	31 days	
June _____	+ 3 days	
Total	52 days	

April
30 days
– 12 days
18 days

Practice

Calculate the number of days between the given dates.

1) From 4th May to 21st June.
2) From 9th October to 11th December.
3) From 3rd January to 15th February.
4) From 15th August to 2nd October.

Calculate the number of holidays.

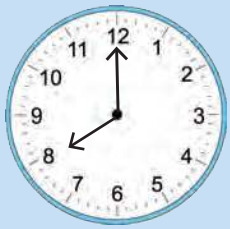
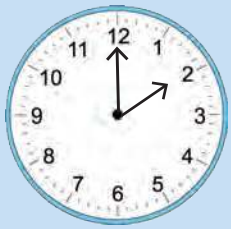
Holidays	From	To	Total days
Summer holidays			

PROJECT

Look at the current year calendar and fill up the table.

Festival	Month	Date	Day
Deepawali			
Christmas			
Miladinabi			
Children's day			
Teacher's day			

Lab activity

Clock - 1 a.m.	Clock - 2 p.m.
	

clock - 1	8:00 a.m.
clock - 2	2:00 p.m.
Time lapse	6 hours

- Divide the children into three groups.
- First group shows the a.m. time in the clock - 1
- Second group shows the p.m. time in the clock - 2
- Third group tells the time lapse.

Fill in the blanks :

Days of an ordinary year	Months	Days of a leap year
	January	
	February	
31 days	March	
	April	30 days
	May	
	June	
	July	31 days
	August	
30 days	September	
	October	
	November	
	December	

REVISION

Answer the following questions.

1) Write the time of the following.

_____

_____

2) Write time with a.m or p.m.

i) 4 o' clock in the morning _____

ii) 11 : 30 in the night _____

iii) 11 : 30 before noon _____

3) Which two successive months have 31 days?

4) Name the month which has less than 30 days.

5) How many days are there in a leap year?

6) Which is the last month of the year?

7) Calculate the number of days between Children's day and Christmas.

Fill in the blanks.

1) 1 hour = _____ minutes

2) _____ hours = 1 day

3) 1 year = _____ days

4) 1 year = _____ weeks

5) 12 months = _____ year

6) Quarter of an hour = _____ minutes

7) Three - quarter of an hour = _____ minutes

‘I can, I did’

Student’s Activity Record

Subject:

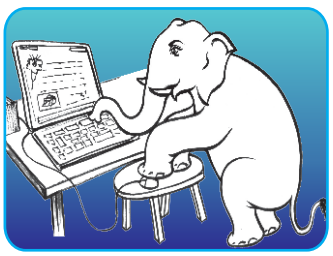
Sl. No	Date	Lesson No.	Topic of the Lesson	Activities	Remarks

SCIENCE

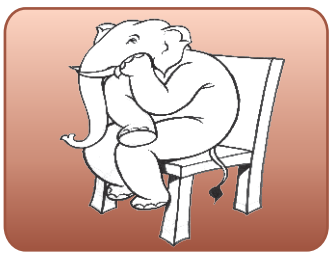
STANDARD FOUR

Term II

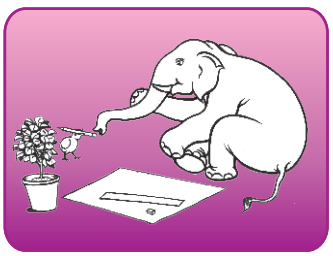
What These Icons Stand For !



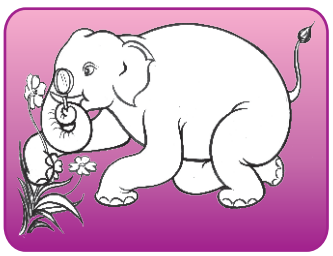
Do You Know ?



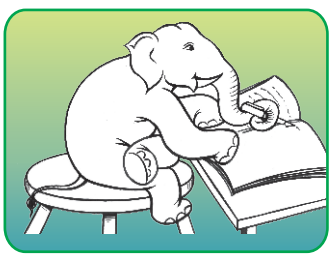
Think and write



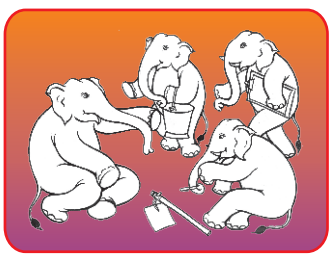
Project



Activity



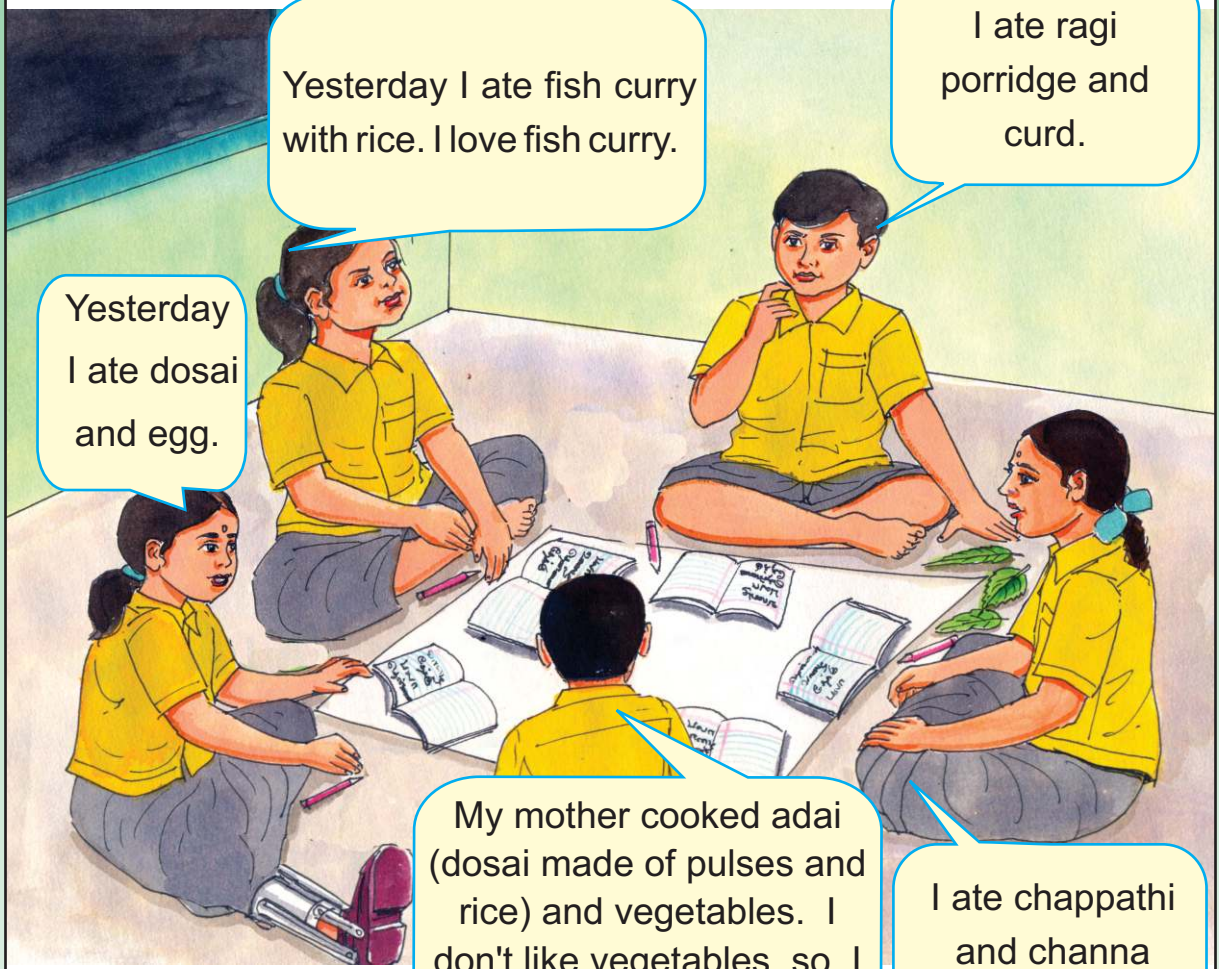
Evaluation



For Teachers...

1 FOOD

There was a discussion in the class room on the topic “What did you eat yesterday?” In the discussion, the students said the following.



Activity

Write about what you ate yesterday.

SCIENCE

Basic needs of our life are food, clothing and shelter. The most important among these is food. All living things need food.

Splendour of food.

- Food gives us energy to work
- Food promotes growth
- Food gives us immunity.

Food substances are classified into two categories. They are raw food and cooked food.

RAW FOOD

When we eat raw fruits, vegetables and tubers, our body will get complete nutrients and our immunity increases.

COOKED FOOD

Can we eat all food substances raw? No, we cannot.

Some food like rice, potato, meat etc., can be eaten only when it is cooked.

When cooked..

- Food gets digested easily.
- Add taste and aroma, germs are killed.
- Food becomes soft.

Think it over!

From the pictures of food given below, find out the food that can be eaten raw and write them in the blanks.






_____, _____,

_____, _____,


_____, _____,

_____, _____,


_____, _____,

_____, _____.






Activity

1. Preparation of fruit salad

Take banana, papaya, apple, grapes and pine apple in a vessel. Wash them and cut into small pieces. Add sugar or honey and mix well. Your fruit salad is ready.

SCIENCE

2. Which are the food you can prepare without cooking? Write their names and the method of preparing them. One example is given below

a. Lemon Juice	b. _____	c. _____
Squeeze half a lemon into a glass of water.		
Add sugar		
stir well and strain		
lemon juice is ready		

For Teachers...

Ask each one of the students to bring vegetables, fruits and grains which are easily available at home and to cook them in groups.

Do not waste food

METHODS OF COOKING

Are we cooking all the food in the same way ? We cook each food differently.

Cooking in steam

Deep Fry

Frying

Roasting

Cooking in water

Activity 

According to the methods of cooking tabulate the following food items.

Rice, chappathi, poori, tuber, thick dosai, murukku, lady's finger, beet root, papad, carrot , spiced pulses, puttu, greens, idly, banana stem, idiaappam, dosai, vadagam, kozhukattai, parotta, porridge, adhirasam and paniaram.

Cooking in water	Cooking in steam	Roasting	Frying	Deep Frying

VARIETIES OF UTENSILS

Observe the cooking utensils at home. Are they all of the same size and shape? No. Why? According to the method of cooking, the size and shape of the utensils used for cooking will vary.

First whistle

Next meal

Name the utensils

_____

List the utensils used for cooking in your house.

_____

_____

_____

_____

Earlier, earthern pots were used for cooking. Later utensils made of iron, brass, stainless steel and aluminium came into existence.

Now-a-days Pressure cookers are being used to reduce fuel consumption and to preserve nutrients.

Activity  What? How? Which?

Food item	Method of cooking	Utensils used
Idly		
Poori		
Dosai		
Rice		

Modern utensils are used for faster cooking

It includes, Induction stove, electric cooker and microwave oven.



Healthy food

For a healthy body, nutritious and hygienic food is necessary. So it is necessary to protect the food from spoilage.

- We must wash vegetables, fruits and greens before using them.
- Food materials must be covered in order to protect them from dust and insects.
- It is better to eat the cooked food when it is warm.

Requirements for a healthy life

For a healthy life, fresh air, clean water and nutritious food are necessary. Lack of any one of these may cause diseases. When we are sick, we cannot eat all types of food, can we?

When we are sick we should

- eat food that gets digested easily.
- take liquid food such as porridge, fruit juice and tender coconut.
- eat food that contains less fat.
- avoid eating pungent food.
- avoid eating food fried in oil.

Over eating is injurious to health

Activity

What sort of foods are to be avoided when sick?

What sort of foods can be eaten? Write in the Tabular column.

Bread, meat, milk,
Parotta, Biriyani, Fish fry,
Porridge, Energy drinks,
Herbal decoction, Bajji.

When sick	
Foods to be avoided	Foods to be eaten

Match the food item and fill in the boxes with proper serial number of the ingredients.

1.	Rice, urad dal	–	Pongal	☐
2.	Bengal gram	–	Payasam	☐
3.	Vermicilli	–	Idly	☐
4.	Rice, moong dal	–	Chappati	☐
5.	Wheat	–	Vadai	☐

Evaluation

(a) Fill in the blanks.

1. Food helps us to _____.
2. Cooking increases the _____ and _____ of food.
3. Idly can be cooked by _____ method.
4. _____ is used for cooking with less fuel consumption and preserve the nutrients.
5. It is good to eat the cooked food when it is _____.

(b) True or False.

1. Food is not useful for the growth of body.
2. By taking food, we are losing energy.
3. While cooking, germs in the food are destroyed.
4. Cooking in steam is a method of cooking.
5. When we are sick, we should eat food containing more cholesterol.

(c) Match the following.

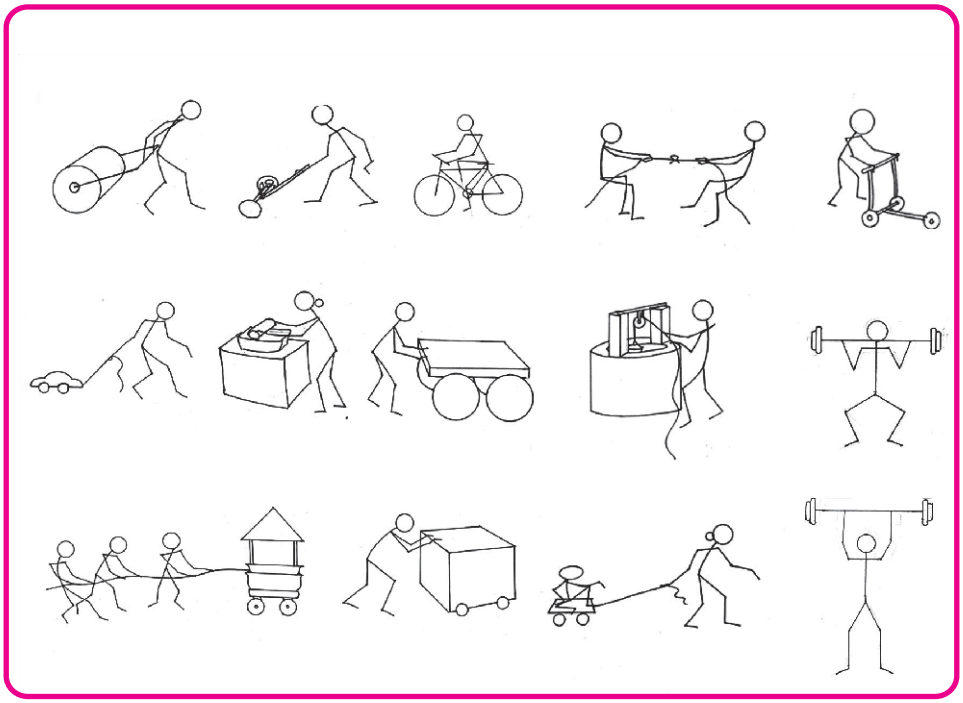
1.	Idly	–	Cooking in water	☐
2.	Poori	–	Fry	☐
3.	Chappathi	–	Deep Frying	☐
4.	Rice	–	Roasting	☐
5.	Groundnut	–	Cooking in steam	☐

(d) Answer the following.

1. What are the uses of food?
2. Name two food items that can be eaten raw.
3. What is the use of cooking in pressure cooker?
4. Write the name of vegetables and fruits that you like to eat.
5. Write about the methods of cooking.
6. Write about the food that can be eaten when sick.

(e) Draw and colour the utensils used for cooking in your house.

2 WORK AND ENERGY



Observe the picture given above and list down the activities in the given table

PULL	PUSH	PULL, PUSH

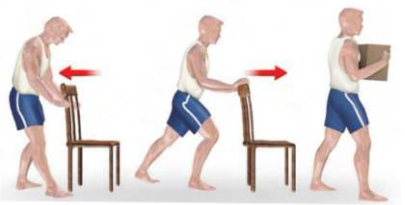
MOTION

When an object moves from one place to another, we say it is in motion.

SCIENCE

FORCE

Objects will not move from one place to another on their own. To move an object or to stop a moving object, force is required. Depending upon the force applied, the object moves either faster or slower.



PULL PUSH MOVING

WORK

Work is said to be done when force acts on a body and moves it in the direction of force.

When an object moves a distance due to a pull or a push, then work is said to be done. If an object does not move by a push or a pull, work **is not done.**

Put tick ✔ for work done and ✘ for work not done to the given activities.

1. Leaning against a wall
2. Lifting up the books
3. Fetching water from the well
4. Reading books
5. Pushing the vehicle
6. Watching television programme
7. Swimming
8. Drawing
9. Talking over the phone
10. Rowing boat

ENERGY

Shotput competition

in the school.

Shotput competition was held in the school. Prabu and Arul took part in the game. Prabu threw the shotput. Since he used less energy, it fell at a shorter distance . Arul threw the shotput with more energy and it landed at a greater distance. The work done by him brought him victory.

The capacity to do work is called Energy.

From where did Prabu and Arul get the energy? They got the energy from the food they ate.

We get energy from the food we eat.

From where does the moving bus, lorry or steam engine get its energy?

Let us try to answer the questions.

Shall we listen to them

I get energy from Coal.

SCIENCE

We get our energy from diesel.

We get our energy from Petrol

Activity

Find out

1. What is the price of petrol and diesel in your area ?

2. What will happen if you don't get petrol or diesel for a week?

3. Suggest some ways to save fuel.

TYPES OF ENERGY

Heat Energy

The energy obtained by the combustion of coal is known as heat energy.

What are the uses of heat energy?

SCIENCE

Electrical energy

Electric energy is produced from hydro electric plant, thermal power plant, atomic plant and wind mills.

Write about the uses of electric energy.

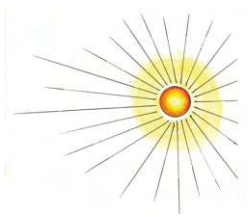
Solar Energy

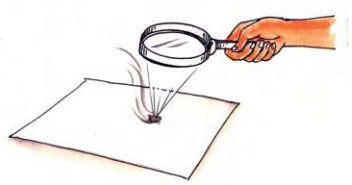
The energy received from the sun is called solar energy. Solar water heater, solar stove, road lights, solar vehicles, etc. work on solar energy.

Activity

Smoke without fire

Take a thin sheet of paper and place it in direct sunlight. Hold a reading lens above the paper in such a way that more rays falls on it. What happens after some time? The paper turns black and smoke comes out.





SCIENCE

Evaluation

(a) Fill in the blanks.

1. _____ is required to shift the objects.
2. The capacity to do work is called _____.
3. The bus gets its energy from _____.
4. _____ is a vehicle which runs due to the energy obtained from petrol.
5. When a body moves, it is said to be in _____.

(b) Answer the following.

1. State the activities that take place in a hospital that can be called work.
2. What will you do to make a paper fan rotate?
3. What are the different types of energy?
4. What are the fuels that are used to light lamps?
5. What are the fuels that are used to run the vehicles?
6. Name the instruments which work with the help of solar energy.

(c) Draw the stick figures representing 'pull and push' action.

3 PERSONAL SAFETY

We read about many accidents in the newspapers. Most of the accidents take place due to our carelessness. We can avoid such accidents and deaths by following some simple safety rules.

SAFETY AT HOME

- Do not scatter toys, slippers etc., on the floor.
- Keep them in their proper places.
- Clean the water or oil or other liquids that are spilt on the floor immediately.

- _____

_____

_____

For Teachers...

Make the students write additional information about the safety rules to be followed at home, road, school and in public places.

If you smell leakage of cooking gas

- Open the kitchen windows.
- Do not use the electrical switches.
- Close the regulators of the gas cylinders.

While handling electric appliances

- Do not touch the electrical appliances with wet hands.
- Avoid using electrical appliances with ruptured insulations.
- Avoid using cell phones while it is being charged.

- _____

To avoid being poisoned

- Keep paints, insecticides and medicines away from the reach of children.
- Do not take any medicine without consulting the doctor.
- Do not eat decayed and spoilt food.
- Do not consume medicines that are of expiry date.
- _____

_____

SCIENCE

ROAD SAFETY

Most of the accidents take place due to carelessness and inefficiency of the drivers. Strictly follow the traffic rules while walking and crossing the roads.

Road rules

- Must walk only on the platform.
- Do not play on the road.
- Before crossing, look on both sides of the road.
- Do not cross in spaces between the parked vehicles.
- Do not use cell phones while driving / riding.
- One must wear helmet while riding a two wheeler.
- _____

Activity

For emergency...

Whom should we call from the numbers given below for our immediate help? Find out and write.

101 _____ 100 _____ 103 _____

Road safety week is celebrated in the first week of January.

Activity

Identify the signs and write their captions.

Do not park vehicles, railway crossing, hospital, do not horn, turn left, stop, go slow, turn right, listen, go, narrow path, school.

SAFETY AT SCHOOL

Children may fall down and get injured while playing in the playground.

To avoid that

- Do not play with sharp tools.
- Do not ignore the game rules.
- Do not involve in rough games.
- _____

SAFETY AT PUBLIC PLACES

- Burst crackers only with the help of elders.
- Do not go to the deep waters.
- To avoid stampede, follow the queue system.
- _____
- _____

First Aid

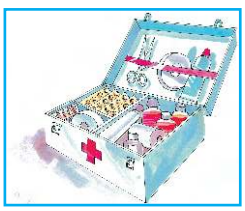
- First control the bleeding of an injury and then take the injured to the hospital.
- In case of a fracture, avoid further movements and tie a support to the fractured part. Then go to the hospital.
- Do not approach a non-medical practitioner.

- Roll and come out of the place of a fire accident.
- Pour cold water on the burnt portions.
- In case of a fire accident, necessary measures should be taken to avoid further spreading of fire in that area.
- Tie a piece of cloth tightly above the place of bite of poisonous insects like scorpion. Then consult a doctor immediately.
- _____

_____

First Aid Box

It is very important to have a first aid box in every school. Following things should be available in the first aid box:



1. Hot water bottle / hot water bag
2. Cotton roll
3. Sterilized white cloth
4. Gauze bandage
5. Pair of scissors
6. Plaster
7. Forceps
8. Soap
9. Antiseptic lotion
10. Antiseptic ointment
11. Rubber belt
12. Candle and matchbox
13. Hand towel
14. Sodium bicarbonate
15. Sodium chloride
16. Spirit lamp / Stove
17. Tincture iodine bottle
18. Tincture Benzoin bottle

Evaluation

(a) Answer the following.

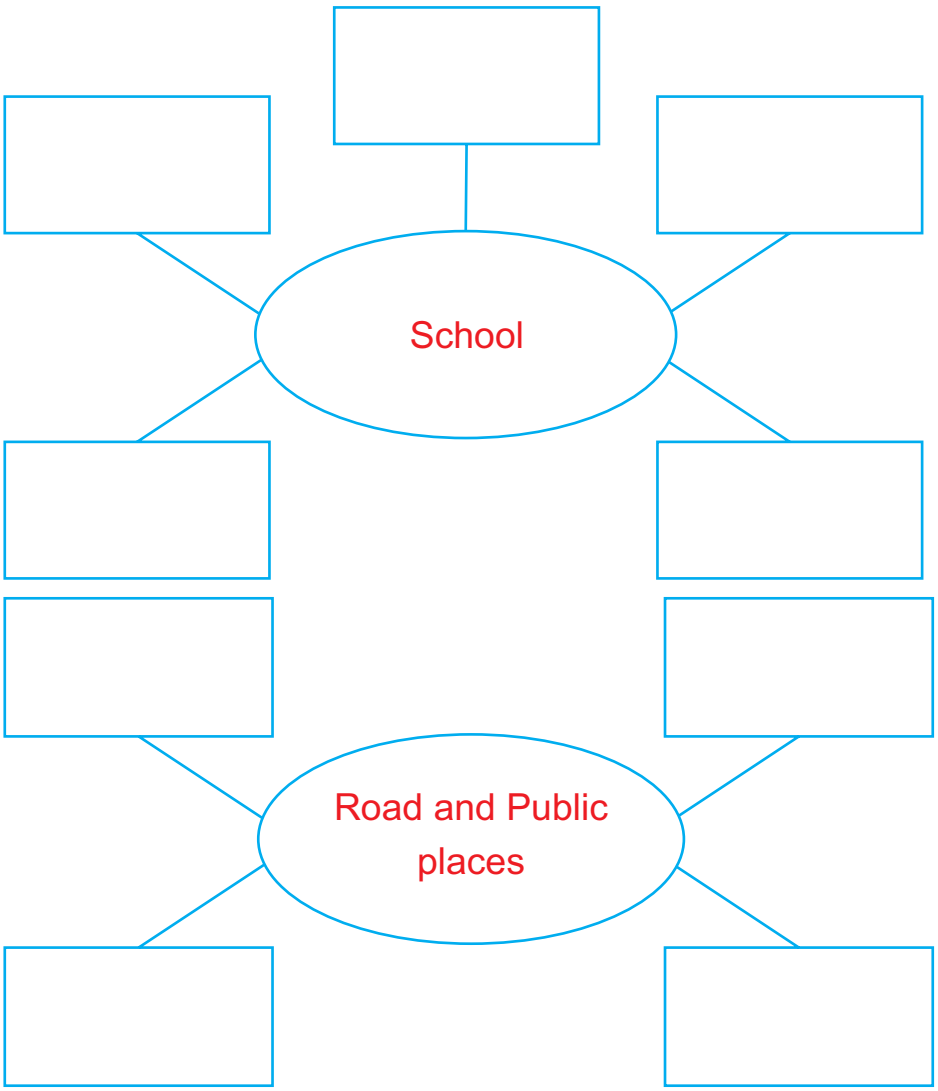
1. Mention four road rules.
2. Name some common accidents that take place at home.
3. Mention the first aid given to a fractured person.
4. How can one save himself or herself from the place of a fire accident?
5. How will you help a blind boy to cross the road while going to school?

(b) Fill in the blanks.

1. Do not _____ contaminated food.
2. Do not touch _____ appliances with wet hand.
3. While walking on the road we must walk on the _____.
4. Students should learn to go in a _____.
5. We must wear _____ for safe walking.

(c) Discuss the results of the wrong activities given in the picture.

(d) Mention some common accidents at School, on Road and in Public places.



(e) What are the first aid methods for the following accidents?

1. For bone fracture

_____

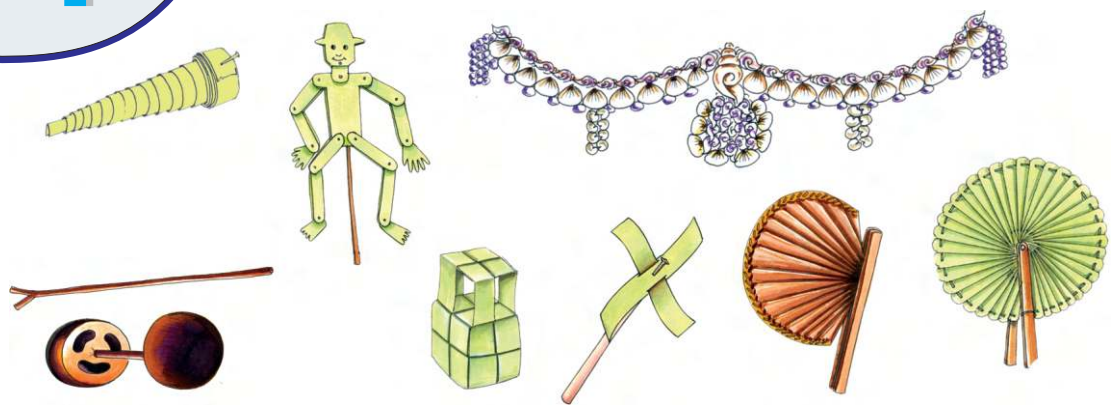
2. For fire accident

_____

3. For external injury

_____

4 USES OF NATURAL RESOURCES



Have you played with these things?

Do you know how they are made?

When coconut is peeled, we get coconut fibre. It is used for making ropes. Likewise, we get many things from waste products. We use them for different purposes.

Activity 

S.No.	Waste	By-product
1.	Bark of banana tree	Plate
2.	Bark of the coconut tree	rope
3.	Dried tree	
4.	Worn out tyres	
5.	Defective electrical appliances	

Resources from nature are called natural resources. Plants, animals, aquatic animals, minerals, water, sunlight and air are natural resources.

Transformation of natural resources into materials for use:

Let us learn about the various uses of rice, husk and rice bran which are obtained from the paddy plant.

The rice we get from paddy plant is used as food.

TWO TYPES OF RICE

Raw rice is obtained by removing the husk from the unboiled rice. While removing the husk some of the nutrition are removed. Boiled rice is obtained by removing the husk from the steamed and dried rice. In this, nutrition is not lost.

GOLDEN RICE

This type of new rice has vitamin A. This improves the eye sight.

We get rice by removing the husk from the paddy. The things we consider as waste such as husk and rice bran are also useful to us.

Let us see how they are useful.

husk

rice bran

HUSK AS A FUEL

Husk is used as fuel in houses and industries.

HUSK AS BRICK

The bricks made from husk and cement are light in weight and protect us from heat. Buildings built out of these bricks have low temperature radiation.

MANURE FROM HUSK

The manure (vermicompost) is obtained when the earthworms are allowed to grow in the husk. This manure is very good for flowering plants.

HUSK AS AIR PURIFIER

Activated carbon from the ash of husk is used to purify water. This kills the germs causing diseases.

Let us see how useful rice bran is !

OIL FROM RICE BRAN

Oil is extracted from the rice bran of the raw rice. It is suitable for cooking because this oil has vitamins and fats that prevent heart diseases. The by-products of this oil is used as food for fish and other animals.

HAY AS FOOD FOR CATTLE

Hay which is produced from paddy is used as fodder for cattle.

Card boards are made from the paste of hay pulp.

Do you know?

Methane gas released from the paddy fields pollutes the atmosphere and increases the temperature.

Transformation of natural resources through industries

STORY OF PAPER

Many centuries ago the Egyptians used different variety of grass called Papyrus for writing. Palm leaves were used in our country. The Chinese were the first to invent paper.

PAPER FROM BAMBOO

Paper is made from bamboo. It is easy to prepare. Grind the bamboo, add water and boil it to get the pulp. This pulp is passed on thin wire mesh to filter the water and is dried by pressing. Now the paper is ready.

- Do you know which plant purifies the air?

It is bamboo. It is a type of grass plant. Bamboo has the best purifying capacity in the world. It grows faster than other plants. Micro-organisms and fungi cannot destroy bamboo plants.

Activity

How are natural resources like rocks, minerals useful?

Rocks : Gravel—To make road

Minerals : _____

SCIENCE

PRODUCTION OF WASTAGES

Things that are not useful for us are called as waste.

What are the waste things present in the dustbin of your house?

Activity 

Write the wastes from places given in the table.

S.No.	Place	Waste
1.	House	
2.	Vegetable shop	
3.	Building construction site	
4.	Office/ school	
5.	Hospital	
6.	Automobile shop	
7.	Nearby industries	
8.	Marriage hall	
9.	Electric goods repair places	

Torn clothes, plastic, glassware, unused vessels, food, old medicinal bottles, broken electrical lamps, used cotton, syringe, syringe tubes, smoke, chemical waste, broken bricks, rubber tube, worn out tyres, torn leaves, smashed paper tumblers, rotten vegetables, lime stone pieces.

TYPES OF WASTE

Biodegradable Waste

Bury the vegetable wastes under the soil. See after a month. You can see that they are decomposed with the soil. Aren't they? These are called biodegradable waste.

Non-Biodegradable Waste

Bury polythene cover under the soil. After a month it will be in the same form. The things which are non decomposable are called non-biodegradable waste.

Project:

Collect tomato, brinjal, banana leaves, glass, flowers, plastics, iron pieces, ceramic, wood, cotton cloth, a piece of brick and small aluminum vessels. Put them in a pit and cover with sand. After few weeks dig the pit and see.

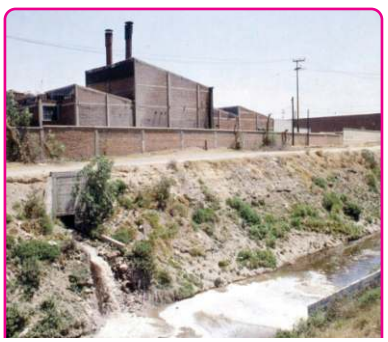
Note down what you have observed in the given table.

S.No.	Things not found in the pit (Biodegradable)	Things found in the pit (Non-Biodegradable)
1.		
2.		
3.		
4.		
5.		
6.		

TYPES OF WASTES AND THEIR SOURCES

- Rotten fruits, broken gravels from building construction, bricks are the solid wastes.
- Waste water from factories, gutter water, wastages in liquid forms are the liquid wastes.
- Smoke from vehicles, industries and poisonous gases are the gaseous wastes.





Activity

List the waste produced from a house, a vegetable shop, a building construction site, a school, an automobile shop, a marriage hall, an electrical shop and a hospital.

Sl. No.	Solid Waste	Liquid Waste	Gaseous Waste
1.			
2.			
3.			
4.			
5.			

SCIENCE

RECYCLING

Have you ever seen a person who buys old paper and old things from your house?

List the things taken by him.

How are these things changed and reused?

Changing the used products into new useful products is called recycling.

You can make papers and products out of pulp made from the waste papers. By doing so, the cutting down of trees will be reduced.

Iron, gold, silver, and copper could be melted and used again.

Things which are marked with  can be recycled.

Things that are not marked with  cannot undergo recycling.

e.g. petrol, diesel, coal etc.,They mostly pollute the environment.

Do you know?

Time taken by the things to undergo decomposition.

1	Paper - 2 to 5 weeks	4	Metal - 50 to 500 years
2	Cloth - 2 to 5 months	5	Glass - 50 to 10 lakh years
3	Wood - 10 to 15 years	6	Plastic - uncountable years

usage of plastics should be avoided. Why?

Evaluation

(a) Fill in the blanks.

1. _____ and _____ are natural resources.
2. _____ is used as an important food.
3. Outer covering of the paddy is called _____.
4. Oil got from rice bran is _____.
5. _____waste is obtained from broken bricks.

(b) Match the following.

1. Rice	–	Manure	☐
2. Bamboo	–	Food	☐
3. Rice bran oil	–	Paper	☐
4. Husk	–	Cooking	☐

(c) Answer in detail.

1. Give two examples for each
   a) Solid wastes b) Liquid wastes
2. What are the uses of husk?
3. How is paper recycled?
4. What are the advantages of growing bamboo trees?
5. Why should we use natural resources in limited quantity?

Project:

Organize a group discussion to find ways and means to clear the biodegradable and non-biodegradable wastes in your school.

'I can, I did'

Student's Activity Record

Subject:

Sl.No	Date	Lesson No.	Topic of the Lesson	Activities	Remarks