Lesson Plan
Class VI
Session 2025-26
Subject: Mathematics

Topic:-DATAHANDLING

(i) No of days - 7

(ii) LEARNING OUTCOMES

- To learn the concept of Tally marks frequency table.
- To learn the Concept of pictograph.
- To learn the Concept of bar graph

3) **P.K.Testing**:-

Teacher will check the previous knowledge of students
Q) What is data?
Q) Do you know the difference between raw data and organized data? Yes/ No
Q)What is pictograph?

4) **Vocabulary used**:-

Data, Organising data, Frequency distribution, Pictograph,
Bargraph.

5) **Important Spellings**:-Frequency, Organised,Tallymarks,Bargraph.

6) Explanation with Innovative methods is used

Model. Chart, Graphs on Smartboard, Task of collecting the data on a particular topic.

PEDAGOGICAL STRATEGIES

7)**Procedure**:-Teacher will introduce the topic with help of definitions.

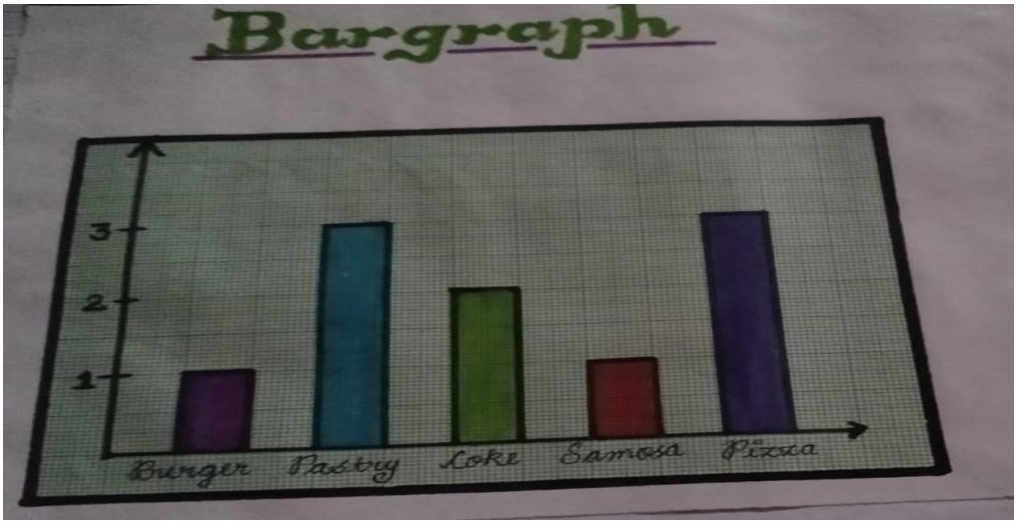
Data:- Data is the collection of facts and figures to give some information.
Teacher will introduce the topic of tally moves by taking an example of blood groups. Different blood groups A, AB, O, B. Arrange in order then prepare the frequency table. Teacher will do the activity in the class. Arrange the students in height wise. Then teacher will told the students to stand together some height wise there for same students

tallymarks is2

(II) Collect the data of five families of salary of parents then prepare the bargraph on it.

8) **ART INTEGRATION**:- Teacher will tell the students to collect data and show it on bargraph presentation.

9)



10) **Art Integration with other domain**:-Teacher will do the poem on bar graph.

When we make a bar
graph. A bargraph A
bargraph
When we make a bargraph The sethings we will
need on axis
A Scale The choices
AND LABELS
Don't forget a little your bars And akey!

11) LIFE SKILLS

(i) Students will able to understand how to collect, sort,organize and classify data.

(ii) Students will able to understand the concept of pictograph Students will able to understand the concept of Bargraphs.

12) INCLUSIVE PRACTICES

ActivityII:-

Thestudentshavetoconductasurveyofeatinghabitsandfoodpreferencesoffamily.

Survey for food preferences

Readthequestionscarefullyandtick onlyonequestions.

(i) Food I like the most is

NorthIndian Chinese Italian

(ii) My favourite meal is

Breakfast Lunch Dinner

(iii) The desert I like the most is

Cake Ice cream Fruits
Sweets
ChocolatesOthers

REMEDIAL TEACHING

Recapitulation:-Teacherwillaskthefollowingquestions.

1. Definepictograph?
2. Whatisrawdata?
3. Representsthe frequencyofnumberon_____

4. Theweightof newbornbabies(inkg)2.8,3.0,2.1,2.5,2.9,2.3,2.8,2.9,2.5, 2.7,3.1,3.7,3.2,3.5

Arrangetheweightinascendingorder.

(i) Howmanybabiesweight2.9kg?

(ii) Howmanybabiesmorethan2.7 kg.

13) **Assessment**:-

Q)Prepareafrequencytableondifferent4typesofsweetsavailablein marketandlikingsweetofdifferentpeople.

Q)Prepare abargraphonwatchingondifferent sportsonT.V.

14)**Resources**:-
SmartBoard,Graphs,Poemonbargraph,CollectdataandSurveyondifferentfamil
ies.

TOPIC –NUMBER PLAY
No of days - 10

1. **P.K. TESTING**

1. What are natural numbers?

2. What is successor of -1?

3. What is the predecessor of smallest 5 digitnumber?

4. Which are wholenumbers,No response.

AIDS/INNOVATIVEMETHODSTOEXPLAINTHETOPIC–
Smartboard,Games,Charts,
Puzzlesetc.

PUZZLE-Usingfour4's,mathematica loperations+,-, /,X and brackets create thenumbers0,1,2and3.

LEARNING OUTCOME–

1. The general outcome of whole number is to introduce 0 which is very important innumbersystem.

2. Thecalculationspeedwillincrease.
3. Students willunderstandtheconceptofrearrangement

2. PEDAGOGICAL STRATEGIES

PROCEDURE–Teacherwill introducethetopicwithdefinitionofwholenumbers.
WHOLENUMBERS–Numberswhichstartsfrom0arecalledwholenumbers.

PROPERTIES OF WHOLE NUMBERS – (a) CLOSURE PROPERTY – For any whole numbersaandb

Wehavea+bisalsoawholenumber.Let a=5b=8 a+b =5+8= 13 which is also a wholenumber.

(b) COMMUTATIVE PROPERTY- For any two whole numbers we havea +b= b +a. for e.g4+8=8+4=12.

(c) ASSOCIATIVE PROPERTY – For any three whole numbersa, b and c we havea+ (b+ c) =(a+b)+c
Fore.g3+(6+2)=(3+6)+2=11.
(d) DISTRIBUTIVE PROPERTY of multiplication over addition and subtraction – For any threewholenumbersa,b,andcwehaveaX(b-c)=aXb+aXc

AX(b-c)=aXb–aXc.

(e) ADDITIVE IDENTITY -a + 0 =0+a = a

.Forexample6+0=0+6=6.

3. **EXPERIENTIAL LEARNING**

INNOVATIVE PEDAGOGY -Participation of students –To check the concept of numbersteacher will give them a magic square to complete , in which the sum of the numbers in eachrow,columnordiagonalbeingthesame.

24		8	15	22
	12	14	21	
11	13	20	27	
17	19	26	28	
18			9	16

4. **ART INTEGRATION**

Make a magic square of 2 digit no ending with 5

5. **LIFE SKILL**

Students will think logically.
Teamwork

6. **REMEDIAL TEACHING**

RECAPTULATION – Solve the following using properties(i)4692x97+4692 x3
(ii) 168x109

(iii) Howmanywholenumbersaresmallerthan9?

(iv) ThewholenumberPsuchthatP/P=PIS?

(v) Allwholenumbersarenaturalnumbersyes/no?

Teacher will encouragethe students to solve this type of questions from book (N.C.E.R.T

)Andalsofromworkbook.

ASSESSMENT

ASSIGNMENT – Students will be asked to complete given assignmenti. eworkbook , whichcontainsM.C.Q,True/False,ValueBasedQuestionandsomeimportantfacts.

INCLUSIVE PRACTICE AND FULL PARTICIPATION.

During lab activities, students will do the magic squares based on whole numbers.

CH–PRIME TIME
No of days - 20

P.K. TESTING-1.Whatis4 times8?

2. Whatareevennumber?

3. Is19anoddnumber?

4. Doyouknowwhatarefactorsof16?

VOCABULARY USED -Factors and multiples, prime and composite numbers, twin prime andco-prime , divisibility rules ,prime factorization

, least common multiple and highestcommonfactor.

IMPORTANT SPELLINGS-Factorization,Divisibility,multiple,composite,primeetc.

LEARNING OUTCOME–1. Givethegeneral formoftwodigitnumberanditsreverse.

2. Givethegeneral formofthreedigitnumberanditsreverse.

3. Solvepuzzlesingeneral formsofnumbers.

4. Checkthedivisibilityofanumberby2,3,5,9,10,6,11.

AID/INNOVATIVE METHODS USED -Teacher will explain this topic by role play (with thehelpofsomestudentsteacherwill explainthistopicbydepictingastory)

ART INTEGRATION

ROLE PLAY –KINDS OF NUMBERS

Narrator – Good morning to one and all present here .today , we the students of class VI aregoingtopresentaroleplayondifferentkindsofnumbers. IamStudentA , thenarrator. Student B and student C are playing the role of numbers (0-9)and different kinds ofnumbers.Let'sbegin.Asyouknowthatmathematicsdevelopstheabilitytothinkandin thisenactmentwearegoing tolearnabout themostcommontopicofmathsi.eNumbers.

STUDENTB–Oh!myheadisaching.Mathematicsissodifficult.Whatarethesenumbers ?Icantunderstandthem.

STUDENT –Mathsisnotdifficult.Don't worrydearfriend,Iwill takeyoutotheworldofnumbers.

NARRATOR–Bothentertheworldofnumbers

STUDENT C -Hello friends ,meet my friend STUDENT B . He wants to know about numbers
.Pleaseintroduceyourselftohim.

Then,thenumbers0-9comeforwardand introducethemselves.

After this , one by one , Different kinds of numbers i.e Even ,Odd ,Prime, Composite ,Co- primeandTwin-primecomeforwardandexplaintheirmeaningswithexample.

STUDENT C –Hey friends , there is something more about numbers . 1 is neither a primenumbernoracompositenumber.Itisanaturalnumber.Andifwetalk about0,all thewholenumbersstartwith0.

STUDENT B- Thank you my dear friends . you helped me to understand different kinds ofnumbersandIwill neverforgettheminfuture.

NARRATOR – I hope you all have understood the concept of numbers .

Thank you and have awonderful day.

PEDAGOGICAL STRATEGIES
PROCEDURE-Afterroleplayteacherwill againexplainthetopicwiththehelpofsmartclass
.

FACTORS–Afactorisexactdivisionofthatnumber.e.g.factorsof16=1,2,4,8,16.

MULTIPLES – A multiple of number is the product that obtained by multiplying that numberbynon-zeronumber.

e.gFirstfivemultiplesof6-6,12,18,24,30.

PRIME NUMBERS – Numbers which have exactly two factors 1 and number itself .e.g2,3,7,11.2istheonlyevenprime.

COMPOSITE NUMBERS – Numbers which have more than two factors are called compositenumbers.e.g4,6,12,18.

TWIN-PRIME NUMBERS – Two prime numbers whose difference is 2 is called as twin primenumbers.

e.g11and13, 71and73 .

CO-PRIME NUMBERS – Two numbers which have no common factor except 1 are called co- primenumbers.e.g19and21.

DIVISIBILITY RULES-FOR 2 – A number is divisible by 2 if the digit at one's place is 0 , 2, 4,6,8.

e.g678,3590etc.

PRIME-FACTORISATION – Prime factorization is the process expressing a number as aproductofprimefactors.

e.g24
=2x2x2x3**HCF –**
HIGHEST COMMON FACTOR FindtheHCFof12an d48. Factorsof 12-1,2,3,4,6,12
Factorsof48–
1,2,3,4,6,12,16,24,48
SotheHCFcomesout tobe12.

L.C.M–LEASTCOMMONMULTIPLE–

FindtheLCMof
12,48,60. ANS-
2x2x2x2x3x5x=
240.

RELATION BETWEEN HCF AND LCM -Product of two numbers = HCFXLCMHCF=Productoftwonumbers/LCM
LCM=Productoftwonumbers/ HCF
PARTICIPATION OF STUDENTS – Tocheck the concept of LCM/HCF. Teacher will give themanactivity.

INNOVATIVEPEDAGOGY–

ACTIVITY-FindLCMofthreenumbersofyour choicesay6,9,12.Step1– Drawagridof10x10asbelow.

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	32	33	34	35	**36**	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Step- 2 Take the first number 6 . Draw a circle around its multiples i.e6,12,18 etc.

STEP 3- Take the 2nd number 9 . Draw a square around its multiples i.e 9,18,27, etc .

STEP4– Takethe3rdnumber12.Drawatrianglearounditsmultiplesi.e12,24,36etc.

STEP 5 – Now observe the grid and write down the numbers which have all threecircles ,squaresandtriangles.Thesearehecommonmultiplesof6,9,12.

LIFE SKILLS

Students will think logically.

Teamwork

REMEDIAL TEACHING

RECAPTULATION–Solvethefollowing

1. Writethenumberwhichhasexactlyonefactor.

2. FindHCFof52and65.

3. Whichisgreatest2digitprimenumber?

4. Is51 acompositenumber?

5. The LCM of two co-prime numbers is 4875. If one of the number is 75 find the othernumber?

CO-SCHOLASTICACTIVITY

ASSESSMENT-StudentswillbeaskedtocompleteW.sheetsfromworksheetbook,do all M.C.Qandvaluebasedquestionetc.

LAUGHTERTIME

TEACHER – Who can tell me what 7 times 6 is

?STUDENT–Its42.

TEACHER – Very good and who can tell me what 6 times 7 is

?STUDENT–Its24!

INCLUSIVE PRACTICES

During Lab period, there is equal participation of students with the help of prime and composite number model.

TOPIC-OTHER SIDE OF ZERO

No of days – 7

P.K. Testing:

1) Definewholenumbers

2) Howmanywholenumbersliebetween15and 25.

3) Successorof9999is.

LEARNING OUTCOME

: Studentswillbeableto understand

(iii) Whatisanintegersandrulesinvolvingoperationon integers

(iv) Solveprobleminvolvingoperationonintegers

(v) Applyintegersinrealworldapplications.

(vi)

VocabularyUsed:	PositiveWords	NegativeWords
	Deposit	Withdrawal
	Increase	Decrease
	Forward	Backward
	Ascendin g	Descendin g

Important Spellings: Below,Temperature,Additive,Inverse

Innovative Method Used to explain the topic:

Teacherwilltellthemasongtolearntherulesforadditionandsubtractionofintegers

ART INTEGRATION

Integers

SongLyrics

Same sign
keep and
AddDifferentsi
gnssubtrac t
Keep the sign of bigger
numberThenanswerwillbeexact

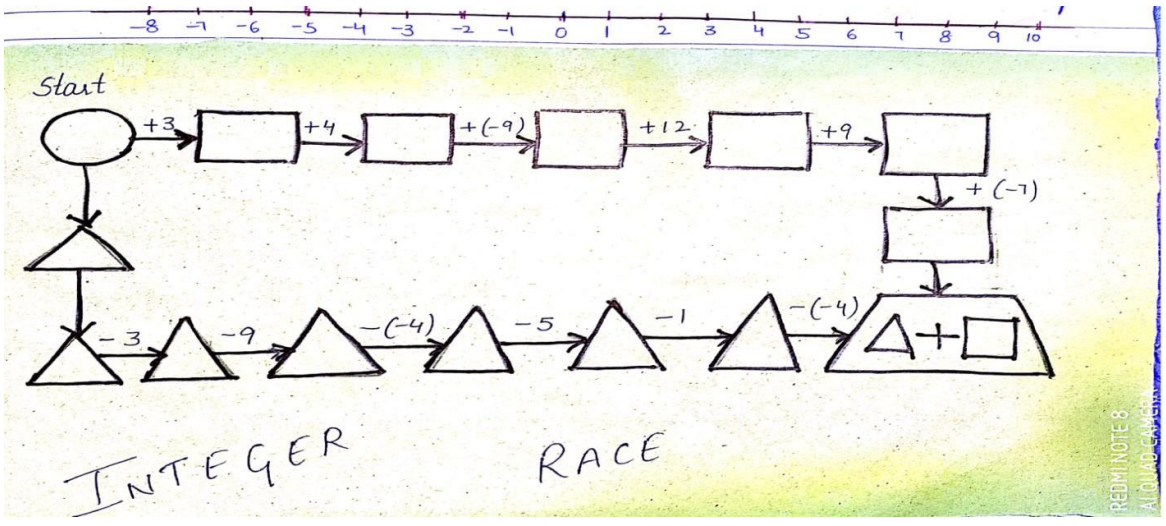
PEDAGOGICAL STRATEGIES

Procedure: Teacherwillintroducethetopicwithdefinitionofintegers.

Integers: Positive and negative numbers along with zero are called integers.Positive numbers lie on the right hand side of zero on number line and negativeintegers lie on

the left side of number line. Teacher will explain same topic with thehelp of smart class. After this teacher will explain them game given at page 123, 124inNCERT Book.

Teacherwillexplaintheintegerstothestudentsonnumberlinealso



INCLUSIVE ParticipationofStudents:

(iv) Writeoppositeof 100 meteraboveSea level.

(v) Whichisgreatestnegativeintegers.

(vi) Find(-1) +(-3)

LIFE SKILLS:

Studentswillbeable

(iii) Applyintegersin realworld.

(iv) Tosolveprobleminvolvingoperationonintegers.

Learn therulesofintegers

REMEDIAL TEACHING

Recapitulation: Solvethefollowing

5. -7-6

6. -8+15

7. 15-11

8. +15-7

ArtIntegrationwithotherdomain: Studentswilllearntointegratemathematicswithdifferentmoduleofartsuchaspaintingdrawingetc.

(v) .

Resources: Smart Board,BlackBoard,Chalk.

Co–ScholasticActivity: Thistopicwillenhancetheproblemssolvingskillofthestudents.

Assessment: Students will be asked to complete given assignments containingMCQ, Hot Questions, Value based and few important sums based upon daily life willbediscussed.

TOPIC- FRACTIONS

No of working days – 10

P.K TESTING :(i) Write the fractions representing the shadedportion. Ans – 1/4 (ii) Write the numerator of fraction 2/9. Ans - 2 (iii) Which are like fractions etc. LEARNING OUTCOME – At the end of chapter students will be able to (a) Find out exact value (b) Identify a fraction by comparing the number of shaded parts to the number of equal parts . (c) Explain what a fraction is ? (d) Identify the number of shaded parts and number of equal parts in a shape (circle , rectangle) .

VOCABULARY USED – Fractions , numerator, denominator, equivalent , mixedetc .

IMPORTANT SPELLINGS- Equivalent , numerator, denominator , proper ,improper etc.

RESOURCES - Smart board , internet , board , book etc . Aids/Innovative ideas used to explain the topic – Teacher willuse smart class to make concept more clear.

ART INTEGRATION Fraction wheel or Rangoli Teacher will encourage students to create a pattern with different coloured papers by cutting them in to ½ , ¼ , 1/8 etc . of the original size of paper .

PEDAGOGICAL STRATEGIES – Fraction : Fraction is a part of a whole F = Numerator / denominator Different types of fractions : - (i) Improper fractions – a fraction in which numerator is greater than denominator for eg. 7/2 . (ii) Proper fraction - a fraction in denominator is greater than numerator for eg . 2/7 . (iii) Mixed fractions – It is a combination of whole and proper fractions . (iv) Like Fractions – two or more fractions having same denominator eg. 2/7,3/7,4/7. (v) Unlike Fractions – Two or more fractions having different denominator eg. 2/3,3/5,3/7. (vi) Equivalent Fractions – fractions that represent the same parts of the whole for eg. ½, 2/4. (vii) Like fractions – to add or subtract two like

fraction we add or subtract numerator ,denominators will remain the same . eg. 1/5 + 2/5 = 3/5. (viii) Unlike fractions – To add or subtract unlike fraction convert them into like then add or subtract. Eg. 9/5-3/4 = L.C.M of 5 and 4 is 20 so makeit 20 by multiplying denominator and numerator both by same number then do subtraction of the produced like fractions. Ans is 21/20 .

LIFE SKILLS Logical thinking and creativity Team work. **INCLUSIVE PRACTICES:-**
Participation of students – To check concept of fraction by giving them an activity . Read the shaded parts and fill the answers in the given table . R O O Y R O O Y R O O Y R O O Y R O O R O O R O Y R O Y R O Y R O Y R – RED COLOUR O – ORANGE Y – YELLOW Teacher will encourage the students to solve this activity . COLOUR FRACTION LOWEST TERM RED 10/100 1/10 ORANGE 16/100 4/25 YELLOW 8/100 2/25 RED + ORANGE 10/100 + 8/100 =18/100 9/50 TEACHER will encourage students to solve the sums given in exercise of NCERT books . Shesolve few questions in class also.

REMEDIAL TEACHING – Teacher will ask few questions : 1. Convert the improper fractions 37/5 , 77/8 into mixed. 2. convert into improper fractions ASSESSMENT – Student will be asked to complete given assignments i.e work sheetbook which contains M.C.Q ,fill ups , T/F , value based questions . Some questions from W.sheet book will be discussed in class also .

ASSESSMENT : Teacher will access the students by giving a test including all topics . Q.1 M.C.Q (a) The fraction which is not equal to 4/5 is :- (i) 40/50 (ii) 12/15 (iii) 16/20 (iv) 9/15 (b) When ¼ is written with denominator as 12 , its numerator is:-(i) 3 (ii) 8 (iii) 24 (iv) 12 (c) Which of the following fraction is the greatest ? (i) 5/7 (ii)5/6 (iii) 5/9 (iv) 5/8 (d) Sum of 4/17 and 15/17 is ? (i) 19/17 (ii) 11/17 (iii) 19/34 (iv) 2/17 (e) If 5/8 = 20/p , then value of P is (i) 23 (ii) 2 (iii) 32 (iv) 16 Q.2 FILL IN THE BLANKS • A number representing a part of a is called a fraction. • 18/5 is an fraction . • Fractions with same

denominator are called _ . • 5/8 + 2/8 gives fraction .
Q.3 State True or False (a) Fraction 18/39 is in its lowest form . (b) Fraction 15/39 and 45/117 are equivalent fraction . (c)The sum of two fraction is always a fraction .(d) 25 / 19 + 6 / 19 = 31/38

Topic : Perimeter and Area
No of days - 7

1. Previous Knowledge Testing :- Teacher will check the previous knowledge of students by show some geometrical figure and ask the question from students and identify the figure.

2. Learning Outcomes :- (i) Students will able to understand the concept ofperimeter of square and rectangle. (ii) Students will able to understand the concepts ofArea of square and area of rectangle.

3. Vocabulary used :- Radius, Diameter, Polygon, Pentagon

4. Important Spellings :- Circumference, boundary, triangular, Region, String

5. Explanation with Innovative Methods links used :- Smart Board, http:/In.Pinterest.com

6. Pedagogical Strategies : Teacher will introduce the topic with the help of definitions. Perimeter is the sum of length of all the sides of triangle is known as perimeter ofrectangle. Perimeter = 2 (l + b) Perimeter of square = 4x side. Perimeter of Equilateral Triangle = 3x side Area :- The amount of surface enclosed by closed cure is called is area. Area = Length × Breadth Area of square = side × side Area is measured in square units.

7. Inclusive practice and participation :- Teacher will give Geometrical figures and askthe students and find the perimeter of these figures. Teacher will explain them to do bamboo craft. Students will make a square and triangle using matchsticks and they will find perimeter.

8. Recapitulation and remedial Teaching :- (i) Find the perimeter of rectangle whose length is8.5cm and breadth 6.5cm (ii) Find the perimeter of square whose side is16cm (iii) Find the area of square whose is 15m (iv) A carpet is 2.5m long and 1.5m breadth. Findthe cost of carpet if cost perimeter is Rs. 25. (v) What is area of square with perimeter 25cm.

9. Art Integration with other domain :- Teacher will do the poem on perimeter andarea. Link :- Teachers Pay Teachers.com.

10. Assessment :- (i) A rectangular park whose length is 6.5cm andbreadth is 3.8. Find the perimeter

of rectangle. (ii) A square park is watered whose length is 3.2.Find the area of square park? (iii) Find the area of square whose perimeter is256cm. (iv) Find the perimeter of rectangle whose length is3.2cm and breadth is 2.4cm. (v) Find the area of tile ins square shape whoseside is 15cm.Smart Board, Poem on perimeter and area, Chess Board to understand the concept of area of square. Geometrical figure for finding the area and perimeter.

Topic:- SYMMETRY

Number of days required:- 4 days

P.K. Testing :-

1) Give two examples of two dimensional figures and tree-dimensional figures.
2) What is the difference between 2D shapes and 3D shapes.

Vocabulary used:- Intersection, axis of symmetry regular hexagon, rota hand symmetry.

Important Spellings :- Intersection, axis, Rotational, Reflection.

Specific Learning outcomes :- By the end of this chapter students will able to understand.

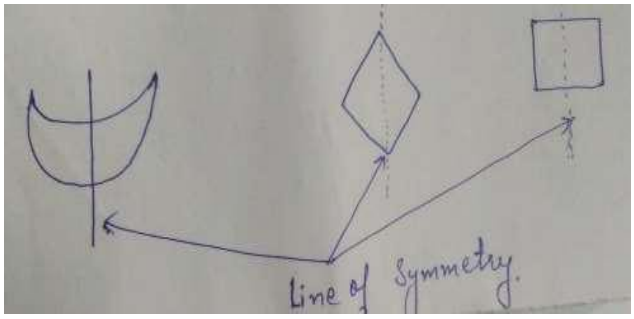
1. Name and recognise the three different types of symmetry, reflection, rotational and line of symmetry.
2. Students will able to understand the different symmetry figure.

Pedagogical strategies

Explanation with Innovative methods

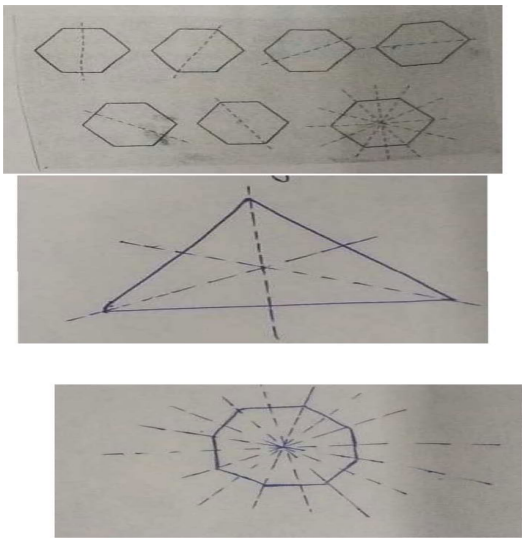
Take a blank sheet of paper, fold it in two halves and open it again. Spread some wet paint on one half, fold it back again and then press it slightly. Now when we unfold the paper slightly, a miraculously beautiful, Symmetric design appears on both sides of papers.

Procedure :- Teacher will Explain the topic with introducing the definition with the help of Black Board. Symmetry abuntant in nature. When we see certain figures with evenly balanced proportion. We say that they are symmetrical. If we fold a picture in half such that left half and right half match exactly then such type



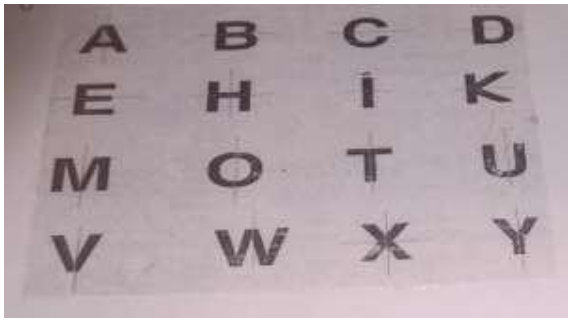
of picture is called symmetrical picture and line divides the picture into two parts is called the line symmetry or axis of symmetry. This folding line is also called aurora line.

Line of Symmetry



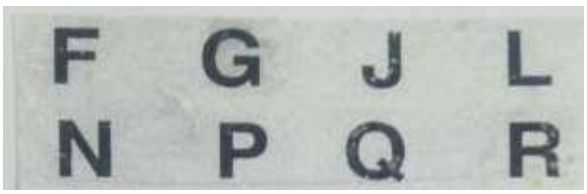
An equilateral triangle has three lines of symmetry.

Students Participation :- Teacher will explain the concepts with diagrams. Now students will actively particulates in class for making the line of symmetry of alphabets



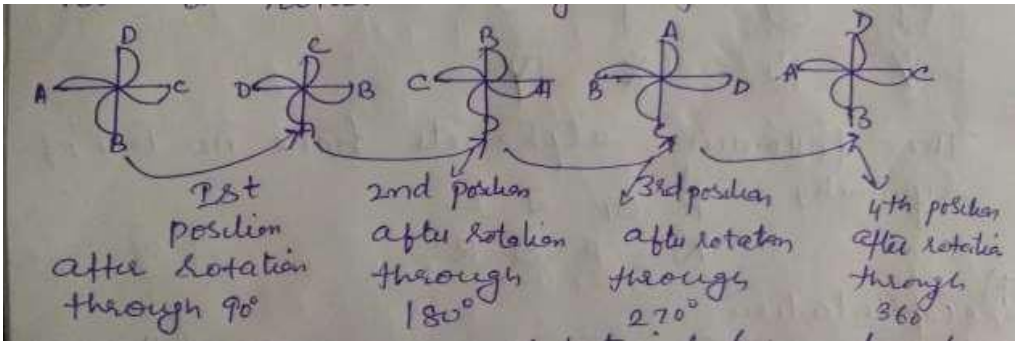
Symmetry of letters of the Alphabet :-

The following alphabets have no line of symmetry.



Art Integration with other domain :-

Make a paper windmill like the one shown in figure. It we rotate it through 90° about fixed point the windmill will look exactly the same. We say that windmill has a rotational symmetry



We say it has rotational symmetry of order 4

Interdisciplinary linkages and infusion of life skills

1) Develop logical thinking .

2) collaboration and teamwork

Resources including ICT

Lab manual activities , PPT, daily life activities on symmetry

Assessment :-

Q1. Give two examples of symmetrical figures in daily life

Q2. Give an examples of triangle having one line of symmetry, two lines of symmetry, no line of symmetry.

Q3. Write an alphabets having

a) vertical line of symmetry

b) Horizontal line of symmetry

c) No line of symmetry

Feedback and remedial teaching

Teacher will ask the following questions.

Q1. What is the difference between line symmetry and rotational symmetry. Q2. Name the alphabets which have no line of symmetry.

Q3. Write the no. of line of symmetry of hermetical figure

a)Square b) Rectangle c) Rhombus d) Regular Hexagon e) circle f) parallelogram weak students will be given an extra attention , they are provided with extra worksheet.

Inclusive practice and full participation without discrimination

Co-Scholastic Activities :-

Symmetry dance play some music. Let two children of same height hold one hand in the centre and perform dances moves like sharing hands in a similar manner in the opp. directions. guide children how to create symmetry postures on both the

sides

Topic :- Lines and Angles

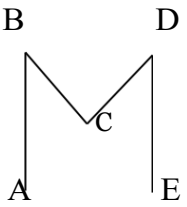
Number of Days : 10

Previous Knowledge Testing:-

(i) What is a line segment, line and a ray.

(ii) Identify the different line segments and angle formed in given figure

Figure



(iii) What are acute, obtuse and right angles?

Vocabulary used: - Complementary, supplementary adjacent, vertically, transversal, corresponding parallel and alternate.

Important Spellings: - Adjacent, corresponding, alternate and parallel.

Specific Learning outcome: - (i) Identify lines, line segments, says, and angles.

(i) Classify angles as acute, right, obtuse or straight.

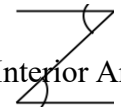
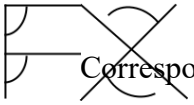
(ii) Identify complementary and supplementary angles.

(iii) Find measures of angles.

Pedagogical strategies

Aids/Innovative Methods used to explain the topic: -

Teacher will explain the concept of corresponding angles, alternate interior angle and corresponding angle, vertically opposite angle with the help of English alphabets.

Alternate Interior Angle  Corresponding Angles  Vertically Opposite Angles.

Procedure: - Teacher will introduce the topic with the help of definition

Line segment: - A line segment has two end points

AB

A B

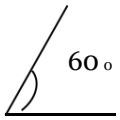
A line: - A line can be extend the two end points in either direction endlessly

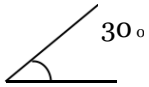
PQ

P Q

Complementary angles: - When the sum of measures of two angles is 90o, the angles are called complimentary.

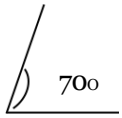
Example

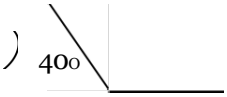




A B

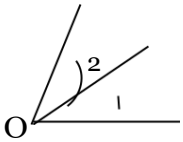
Supplementary angles: - When the sum of measure of two angles is 180o, the angels are called supplementary



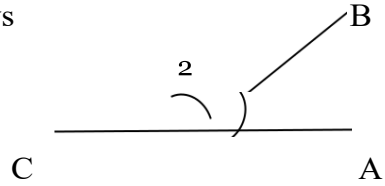


Example

Adjacent angel:- Adjacent angles have a common vertex and and a common arm but no common interior points.



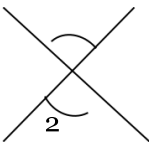
Linear pair: - A linear pair is a pair of adjacent angles whose non-common sides are opposite rays



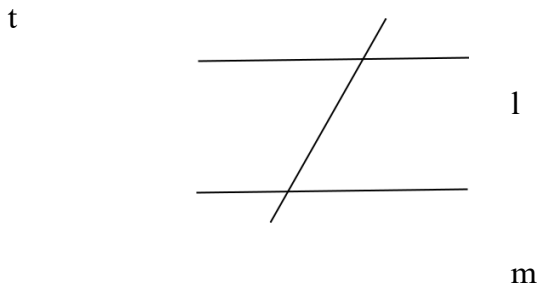
O

Vertically opposite angels: - When two lines intersect, the angels on the opposite side of intersection point are called vertically opposite angels and they are always equal.

1

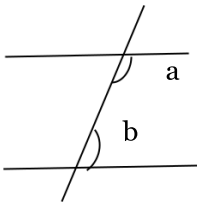


Transversal:- A line that intersect two or more lines at distinct points is called a transversal



If lines are parallel, corresponding angles are equal and alternate interior/exterior angles also equal.

Moreover, if lines are parallel, each pair of interior angles on the same side of thee transversal are supplementary i.e.



Interdisciplinary linkages and infusion of life skills;- (i) develop logical thinking

(ii)collaboration and team work

Resources including ICT

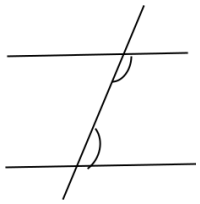
(i) NCERT
(ii) Thinker active
(iii) Smart class content

Assessment items

(i) The complement of the angle measuring 25 degree is…….
(ii) The supplement of the angle measuring 100 degree is …..

(iii) Two angle, 1 and 2 form a linear pair . if we increase the measure of angle 1 the measure of angle will …….

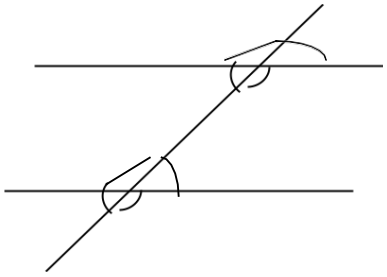
(iv) Angle a and Angle b in the given fig. form a pair of



Feedback and remedial teaching

Recapitulation: - (i)Find the complement angle of 35 o

(ii) Identify the pairs of corresponding angles, pair of alternate interior angles, and vertically opposite angles.

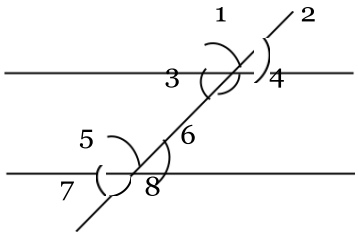


Inclusive practice and full participation without discrimination

(i) find examples from your surrounding where line intersect at right angle

(ii) Try to identify a few transversal in your surrounding.

(iii) In the given figure, identify the interior angles, exterior angles, pair of corresponding angles, pair of alternate interior angles, alternate exterior angels and pair of interior angles on the same side of the transversal



Topic: Patterns in Mathematics

Number of periods - 8

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1. General Objectives

To develop logical thinking and reasoning.

To enhance problem-solving skills through recognition of patterns.

To relate mathematical patterns to daily life situations.

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2. Specific Learning Objectives

By the end of the lesson, students will be able to:

Identify and describe simple patterns (numbers, shapes, objects).

Extend a given pattern logically.

Create their own patterns using numbers and shapes.

Relate patterns to multiplication tables, sequences, and symmetry.

---

3. Teaching Aids / Resources

Blackboard / Whiteboard

Chalk / Markers

Chart papers with number patterns and shape patterns

Flash cards with designs

Multimedia (if available – PPT/Smartboard)

4. Previous Knowledge Assumed (PK Testing)

The teacher will ask:

"What comes after 2, 4, 6?"

"Can you continue 3, 6, 9...?"

"What shapes can you see in a rangoli or floor tiles?"

This will connect their knowledge of sequences and shapes to today's topic.

---

5. Introduction

Teacher shows a rangoli/brick wall/tile design and asks:

"What do you notice in this picture?"

"Is there any repeating arrangement?"

Explain that such repeated arrangements are called patterns.

---

6. Presentation
Activity 1 – Number Patterns

Write: 2, 4, 6, 8, … and ask students to continue.

Discuss how this is formed (adding 2 each time).

Show other examples:

5, 10, 15, 20 … (multiplication table pattern)

1, 4, 9, 16 … (square numbers)

Activity 2 – Shape Patterns

Show shapes: ▲🍔 ?

Students guess the next symbol.

Give more examples: colors, symbols, alphabets.

Activity 3 – Creative Pattern Making

Students create their own patterns in notebooks (using numbers, shapes, or colors).

---

7. Explanation

Patterns are arrangements that follow a rule.

They are everywhere – in maths, nature, art, music, and architecture.

They help us predict and solve problems.

---

8. Application
Teacher asks students to find patterns in:

Days of the week, months of the year.

Odd and even

Topic: Playing with Constructions

Number of periods - 12

1. General Objectives

To develop visualization and drawing skills in geometry.

To enable students to understand the use of geometrical instruments.

To promote accuracy and neatness in geometrical constructions.

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2. Specific Learning Objectives

By the end of the lesson, students will be able to:

Identify and use basic geometrical tools (scale, compass, protractor, set square).

Construct basic geometrical figures (line segments, perpendiculars, angles, bisectors, circles).

Understand the importance of precision in constructions.

Relate construction skills to real-life situations (engineering, design, architecture).

---

3. Teaching Aids / Resources

Blackboard / Whiteboard

Geometry box (scale, compass, protractor, divider)

Chart papers with sample constructions

Smart board / multimedia (if available)

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4. Previous Knowledge Assumed (PK Testing)

Teacher asks students:

“How do we draw a straight line?”

“What is the use of a compass in geometry?”

“How do you measure an angle?”

This will recall their knowledge of basic tools.

---

5. Introduction

Teacher shows a picture of buildings/bridges and asks:

“What do you notice about their designs?”

“How do you think such accurate shapes are made?”

Explain: “In geometry, we use constructions to make accurate figures with instruments.”

6. Presentation

Activity 1 – Constructing a Line Segment

Teacher demonstrates drawing a line segment of length 6 cm using a ruler.

Students practice in notebooks.

Activity 2 – Perpendicular Bisector

Teacher shows step-by-step using a compass.

Students replicate in notebooks.

Activity 3 – Angle Construction

Teacher demonstrates construction of:

60° using a compass.

90° using perpendiculars.

Bisecting an angle.

Students attempt under guidance.

---

7. Explanation

Construction means drawing figures accurately using instruments.

Accuracy and neatness are essential.

Every construction follows logical steps based on geometry properties.

---

8. Application (5 minutes)

Teacher asks students to think where constructions are used in daily life:

Designing houses/buildings.

Making rangoli or floor tiling.

Drawing maps.

Creating patterns in clothes/furniture.

---

9. Assessment (5 minutes)

Teacher evaluates by giving short tasks:

1. Draw a line segment of 5 cm.

2. Construct its perpendicular bisector.

3. Construct an angle of 60°.

4. Bisect the above angle.

---

10. Expected Learning Outcomes

Students will:

Use geometry instruments correctly.

Construct line segments, perpendiculars, and angles accurately.

Appreciate the importance of constructions in mathematics and real life.

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11. Remedial Measures

Give step-by-step guided practice to weaker students.

Use slow demonstration with repeated explanation.

Pair weaker students with stronger peers for peer learning.

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12. Homework

Draw:

1. A line segment of 7 cm and its perpendicular bisector.

2. An angle of 90° and bisect it.

3. A circle of radius 3 cm.