CURRICULUM PLANNING 2023-2024 (PALLAVUR / TATTAMANGALAM /KOLLENGODE)

CLASS: I **SUBJECT:** MATHEMATICS **RESOURCE MATERIAL/ TEXT: MATHS XPRESS** **NO. OF CHAPTERS: 13**

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids***	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
JUNE **21 DAYS/ 21 PERIODS**	**BRIDGE COURSE** (FOUNDATIONAL NUMERACY) (Pg 1 - 15 **UNIT 12** **PATTERNS** **(pg-174-181)** **Cross Curricular Connect** • Variety of patterns in the shapes all around us **UNIT – 1** **NUMBERS UP TO 20 (pg 17 – 32)**	➡ Observe patterns and fill the sequence ➡ TENS & ONES ➡ NUMBERS FROM 11 TO 20	*IT Integration- Videos on patterns around us* *Art Integration- Draw patterns using different shapes* *Bud painting using cotton buds.* *Thumb art* *Experiential Learning- Create a pattern using vegetables dipped in colours as per instructions given.* Make different patterns using thumb printing. **Lab activity: 1** Using different shapes >Complete the number patterns. >Complete the picture patterns. **REVISIO N STATION(pg 180)** **CLASS TEST 1** **WORKSHEET (pg 181)** *IT Integration- Videos on numbers up to 10* *Art Integration- create*	➡ Create and evaluate patterns with different figures and shapes. ➡ Create and examine patterns using letters and numbers. ➡ Understanding the concepts of tens and ones	**Intellectual development** ➡ Independent thinking ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification ➡ Independent thinking ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind ➡ Aesthetics : Appreciation of beauty	10 4 7

		➡ TENS AND ONES IN ABACUS ➡ COMPARING NUMBERS ➡ DECREASING AND INCREASING NUMBERS ➡ ORDINAL NUMBERS	*different pictures using numbers with help of instructions given* *Experiential Learning- (pg 30)Observe the objects in the classroom, count and write the number name (up to 20)* **Lab activity: 2** Using beads >Counting using objects and pictures >Number games ✓ *Flash cards, Games using number cards* >Number games **REVISION STATION (PG 31)** **CLASS TEST 2** **WORKSHEET (PG 32)** **PROJECT :** *Prepare an Abacus*	➡ Write numbers from 0 to 20 in numerals and in words ➡ Form a number using tens & ones ➡ Compare numbers upto 20 ➡ Describe ordinal numbers	Independent thinking ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind Cultural motivation Involvement in drawing	

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids*	Learning outcomes	Integrated values	No. of periods for each chapter
JULY 19 DAYS/ 19 PERIODS REVISION **PT-1 July 10th to July 17th**	**UNIT – 2** **ADDITION UP TO 10** **(pg- 33- 48)** **Cross Curricular Connect** • Art integration • Flower Addition ADDITION TABLE OF 1 AND 2 (ORAL DRILL)	➡ Addition ➡ Addition on the number strip and bonds ➡ Vertical & Horizontal Addition ➡ Addition using number train ➡ Order in addition ➡ Story Sums ➡ Adding 3 numbers using number strips	*IT Integration- Videos on addition on the number strip* *Zero concept* *Art Integration- Colour the picture according to the sum of numbers* *Experiential Learning- (pg 46)* *Understanding number bonds* *Addition using different objects and pictures.* *Sports Integration- Number Games* **Lab activity: 3** >Addition using abacus >Addition of three single digit numbers. **REVISION STATION (PG 47)** **CLASS TEST 3** **WORKSHEET (PG 48)** **PROJECT:** ***Create addition facts using matchsticks***	➡ >Learn to add objects and numbers ➡ >Learn to add a number with zero ➢ Read and understand word problems ➡ >number patterns ➡ understand the concept of addition table ➡ >Learn to count and write ➡ >Learn to compare. ➡ >Learn the number concept	**Intellectual development** ➕ Analytical ability ➕ Observation ➕ Concentration ➕ Comparison ➕ Classification	9 3
	UNIT 10	➡ Reading the Time	*IT Integration - Videos*	➡ **Read time to the**	Intellectual development	7

	TIME & MONEY (pg157 – 168) **Cross Curricular Connect** • EVS –Ch - 17 Earth & the Sky • GK- Festivals	➡ Events in a day ➡ Days of the week ➡ Months in a year ➡ Money ➡ Notes & coins	*on showing time, days of a week, months in an year* *Art Integration- Make a clock out of paper plate as per the instructions given.* *Trace coins* *Experiential Learning- (PG 161) Daily routine, Calendar activities* *Understanding time by adjusting hands on an old clock*	**hour** ➡ **Identify the days of the week and months of the year** ➡ **Recognize notes & coins of the Indian currency** ➡ **Count m** ➡ **oney**	➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification ➡ Creativity and Imagination	

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids***	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**

AUGUST **18 DAYS/ 18 PERIODS** **PT- 2** **16th August to 23rd August.**	**UNIT 10** **TIME & MONEY (pg157 – 168) CONTD.** **Cross Curricular Connect** • EVS –Ch - 17 Earth & the Sky GK- Festival **UNIT 3** **SUBTRACTION UPTO 10 (pg-49-67)** **Cross Curricular Connect** ➡ Information literacy ➡ Introduction to terms in subtraction	➡ Subtraction ➡ More subtraction ➡ Subtraction o number strips ➡ Subtraction facts ➡ Subtraction using the number train ➡ Vertical subtraction ➡ Number family ➡ Story sums ➡ Addition & Subtraction	**Lab activity: 4** >Make a birthday chart with date and month **REVISION STATION (PG 167)** **CLASS TEST 4** **WORKSHEET (PG 168)** **PROJECT:** *Draw any one major activity that you do on each day of a week.* *IT Integration- Videos on subtraction using number strips, zero concept in subtraction* *Art Integration- Colour the picture according to the difference of numbers* *Experiential Learning- (PG 65)* Subtraction using different objects and pictures. *Sports Integration- Jumping backwards on the number strip* **Lab activity: 5** >Subtraction of three single digit numbers. **REVISION STATION** (PG 66) **CLASS TEST 5** **WORKSHEET (PG 67)**	➡ Perform subtraction upto 10 ➡ Solve subtraction on number strips ➡ Create number family ➡ Analyse and solve subtraction word problems	**Intellectual development** ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification ➢	4 14

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids*	Learning outcomes	Integrated values	No. of periods for each chapter
SEPTEMBER 17 DAYS/17 PERIODS	**UNIT 11 DATA HANDLING (pg 169-173)** ADDITION TABLE OF 4 (oral drill) **UNIT 6 NUMBERS UP TO 50 (pg 99- 112)**	➡ Data collection ➡ Numbers from 21 to 30 ➡ Numbers from 31 to 40 ➡ Numbers from 41 to 50 ➡ Comparing numbers using >,<, = ➡ Forming numbers	*IT Integration- Video on data handling* *Art Integration- Analyze their class birthday chart and draw conclusions* *Experiential Learning-(pg 172)* >Write the names of friends and write the number of same letters in them and find the number of letters **REVISION STATION (PG 172)** **CLASS TEST 6** **WORKSHEET (PG 173)** **PROJECT :** *Measuring the length of arms of classmates* *IT Integration- Videos on comparision of numbers, expanded form of numbers up to 20* *Art Integration- Create different pictures using numbers with help of instructions given.* *Experiential Learning-(PG*	➡ Classify and represent various things in an organized manner ➡ Analyse & interpret data ➡ Recall & count numbers till 50 ➡ Write numbers from 21 to 50 in numerals & words ➡ Compare nubers using < > = ➡ Form 2 digit number	Independent thinking ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind Independent thinking ➡ Logic & reason Intellectual conviction ➡ Training the mind	4 6

	REVISION		*110)* *Count the objects and identify the number* *Sports Integration-* *Number Games* **Lab activity:6** *Using Ganitmala, forming numbers* Use abacus and show numbers .			7

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids*	Learning outcomes	Integrated values	No. of periods for each chapter
OCTOBER 19 DAYS/ 11 PERIODS TERM 1 5TH OCT – 19th OCT	**UNIT 6 NUMBERS UP TO 50 (pg 99- 112) CONTD.** **REVISION** **TERM 1 EXAMINATION**		**CLASS TEST 7** **WORKSHEET (PG 112)**			8 3

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids*	Learning outcomes	Integrated values	No. of periods for each chapter
NOVEMBER 22 DAYS/22 PERIODS	**UNIT - 5** **ADDITION & SUBTRACTION UPTO 20** **(pg 83-98)** **Cross Curricular Connect** • Environmental literacy • Decoding message	KEY CONCEPTS ➡ Addition ➡ Adding two single digit number ➡ Addition of single digit & two digit number ➡ Addition using the number strip ➡ Subtraction ➡ Subtraction using the number strips	*IT Integration- Video on addition and subtraction up to 20* *Art Integration- Add or subtract the given numbers and then give colours to the picture according to colour key given* *Experiential Learning- (pg 96)* *Addition and subtraction using Abacus* *Sports Integration- Number Games using number strip* **Lab activity: 7** using abacus >Skill practice based on	Learning Outcome: ➡ Solve addition of two single digit number ➡ Perform addition of a single digit number to two digit number ➡ Perform subtraction of two digit number from two digit number	Universal outlook ➕ Recognizing commonalities as opposed to differences Using discrimination by differentiating Intellectual development ➕ Independent thinking ➕ Analytical ability ➕ Observation ➕ Concentration ➕ Comparison	14

	UNIT 8 **NUMBERS upto 100** **(pg 124 -135)** **Cross Curricular Connect** ➡ Art integrated learning ➡ Draw a tree similar to the given image	➡ Numbers from 51 – 60 ➡ Numbers from 61 – 80 ➡ Numbers from 81 – 100	addition and subtraction ✓ *Magic triangle* **REVISION STATION (PG 97)** **WORKSHEET (PG 98)** **CLASSTEST 8** *IT Integration-Videos on all key concepts* *Art Integration-* **A***ct as numbers and explain the fact that zero has a value when it comes after a number* *Experiential Learning& Sports Integration (pg 133)-* games (ordinal and cardinal numbers) **Lab activity: 8** using place value cubes and rods >Skill practice using number concept >Missing positions	➡ Learn the number concepts ➡ >Learn the usage of symbol ➡ Learn to use an abacus ➡ Increasing and decreasing	➡ Classification Intellectual development ➡ Independent thinking ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification	8

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids***	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**

DECEMBER 16 DAYS/ 16PERIODS	**UNIT 8** **NUMBER upto 100** **(pg 124 -135)** **Contd..** **Cross Curricular Connect** ➡ Art integrated learning ➡ Draw a tree similar to the given image **UNIT 4** **SHAPES** **(pg 69- 82)**	➡ Shapes around us. ➡ >Rolling and sliding objects ➡ >Straight and curved lines	**CLASS TEST 9** **WORKSHEET (PG 135)** *IT Integration- Videos on shapes , spatial concepts* *Art Integration-* Draw pictures using curve and straight lines *Experiential Learning- (pg 77 & 80)* Identify basic shapes rolling and sliding objects *Teaching aid:Charts based on shapes* *Sports Integration- Formation of different shapes through yoga postures* **REVISION STATION (PG 81)** **CLASS TEST 10** **WORKSHEET (PG 82)**	➡ Identifying and name various shapes ➡ Examine & classify objects based on their shapes ➡ Assess and find out whether an object can roll,slide or roll and slide .	Intellectual development ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification ➡ Creativity and Imagination	4 12

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Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids***	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
JANUARY 22 DAYS/ 22 PERIODS **PT-3 8th Jan to 17th Jan.**	**UNIT 7 MEASUREMENT(activity)pg 114-123)** **Cross Curricular Connect** • Information literacy • Identify heavy and light objects • Non standard units of	➢ >Length ➢ >Weight ➢ >Capacity	*IT Integration-Videos on measuring length, weight, capacity* *Art Integration-* Make balance using waste materials *Experiential Learning-* Measure the objects in the classroom. **Lab activity: 10** Demonstrate the use of balance *Common balance, Scale, Measuring Jugs*	➢ >Learn to measure length, quantity and volume ➢ >Learn the movement of see-saw according to the weight	Independent thinking ✚ Logic & reason ✚ Intellectual conviction	7

	measurement **REVISION** **<u>UNIT 9</u>** **ADDITION AND SUBTRACTION UP TO 99** **(pg 136- 153)** **<u>Cross Curricular Connect</u>** • EVS (pg 150)	➡ Addition of 2 digit number with 1 digit number. ➡ Addition of tens ➡ Addition of 2 digit number with 2 digit number. ➡ Addition with regrouping tens and ones ➡ Subtraction on abacus ➡ >Subtraction of 2 digit number from 2 digit number ➡ Subtraction with regrouping tens and ones ➡ >Story sums	**REVISION STATION (PG 123)** **CLASS TEST 11** **PROJECT:** *Make balance using waste materials* *IT Integration-Videos on addition and subtraction of 2 digit numbers without regrouping* *Art Integration- Students will prepare tens place using ice cream sticks with 10 bindis on it. Other ice cream sticks with numbers 0 to 9. Add or subtract various combinations and find results* *Experiential Learning-* Addition of two 2 digit numbers using abacus **<u>Lab activity:11</u>** using abacus >Skill practice based on addition and subtraction >Number grids >Quiz	➡ >Learn to add and subtract ➡ >Read and understand the step problems ➡ Perform addition and subtraction of numbers upto 99 with & without regrouping ➡ >Learn to add and subtract ➡ 1 digit with 2 digit ➡ 2 digit with 2 digit ➡ learn numbers and number names beyond 400	Training the mind Independent thinking ✚ Logic & reason ✚ Intellectual conviction ✚ Training the mind	2 13

			>Puzzle Learning addition using beads			

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art Integration/ Experiential Learning/ IT Integration/Sports Integration/*Teaching Aids*	Learning outcomes	Integrated values	No. of periods for each chapter
FEBRUARY **21 DAYS/ 21PERIODS**	**UNIT 9** **ADDITION AND SUBTRACTION UP TO 99** **(pg 136- 153)** **CONTD** **Cross Curricular Connect** • **EVS (pg 150)** UNIT 13 INTRODUCTION TO MULTIPLICATION (pg 182-188)	>Identify groups of same numbers >Skip counting REPEATED ADDITION	**REVISION STATION (PG 154)** **CLASS TEST 12** **WORKSHEET (PG 155)** *IT Integration- Videos on repeated addition and skip counting* *Art Integration- Students will draw pictures and group them to understand repeated addition* *Experiential Learning-(PG 187) Multiplication using sticks and beads*	>Learn to count in groups. >understand the concept of multiplication >Learn repeated addition Understanding multiplication using skip counting	Intellectual development Analytical ability Observation Concentration Comparison Classification Creativity and Imagination Independent thinking Logic & reason Intellectual	5 6

	REVISION		*LEARNING MULTIPLICATION AS REPEATED ADDITION* **Lab activity:12** >Skip counting game **CLASS TEST 13** **WORKSHEET (PG 188)**		conviction Training the mind	10
MARCH	***ANNUAL EXAMINATION***					

CURRICULUM PLANNING 2023-2024 (PALLAVUR / TATTAMANGALAM /KOLLENGODE)

Class: II **Subject:** Mathematics **Resource Material/ Text: Maths Xpress** **No. of Chapters: 14**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art/ Technology Integration/Experiential learning	Learning outcomes	Integrated values	No. of periods for each chapter
JUNE 21DAYS/21 PERIODS	**BRIDGE COURSE** **UNIT- 1 NUMBERS UPTO 200 (page no. 1 to 18)** **Cross Curricular Connect** • Learn meaning of the numbers on milestone. • Significance of colours on milestones.	➡ Basic Mathematical concepts. ➡ Numbers and number names ➡ Missing numbers ➡ Before and after number ➡ Comparing Numbers (>,< or =) ➡ Descending and ascending order ➡ Place value and Face value ➡ Expanded form ➡ Forming Numbers ➡ Even and odd numbers ➡ Skip counting on number line (2s, 3s,5s,10s) ➡ Ordinal and cardinal numbers	Art Integration ✓ Join the dots using numbers to get pictures. ✓ Experiential learning ✓ Make a ladder ✓ Counting using objects and pictures. ✓ Position games ✓ Sports Integration To find the position while standing for assembly and also their position in different sports and games. IT Integration Videos on place value and position. **Lab activity:1** Using place value cubes and rods Using Abacus **REVISION STATION (PAGE NO. 17)** **CLASS TEST 1** **WORKSHEET (PG NUM 18)**	➡ Recalling ➡ Identifying numbers and number names till 200 ➡ Write numbers from 0 – 200 in numerals and words. ➡ Compare numbers upto 200 ➡ Differentiate between even and odd numbers. ➡ Understand number concept ➡ Learn to write numbers in increasing and decreasing order ➡ Learn before and after numbers. ➡ Learn the ordinal and cardinal numbers ➡ Uses place value and writing and comparing two digit number ➡ Forms the greatest and smallest two digit numbers with and without repetition of given digits ➡ Learn different types	**Intellectual development** ➕ Independent thinking ➕ Analytical ability ➕ Observation ➕ Concentration ➕ Comparison ➕ Classification ➕ Independent thinking ➕ Logic & reason ➕ Intellectual conviction ➕ Training the mind ➕ Cultural motivation ➕ Involvement in drawing	6 9

	UNIT- 10 **THE WORLD OF SHAPES (page no.138 to 151)** **Cross Curricular Connect** • EVS : Different shapes in and around us. MULTIPLICATION TABLE OF 2	➡ Types of lines (straight, curved, vertical ,horizontal and slanting lines) ➡ 2 D and 3 D Shapes ➡ Shadow ➡ Rolling and Sliding	**Art Integration** Draw designs using straight and curved lines ✓ Tracing outlines of different shapes ✓ Kite making ✓ Experiential learning (Pg. 149) ✓ List out the objects having different shapes ✓ Quiz and riddles ✓ Sports Integration Yoga postures Divide into groups and form different shapes. IT Integration Videos on yoga postures **Lab activity:2** Using two dimensional and three dimensional shapes Rolling and Sliding objects **REVISION STATION (pg 150)** **CLASS TEST 2** **WORKSHEET (pg 151)** **PROJECT :** **Kite making**	of lines ➡ Identifying different shapes with real objects. ➡ Distinguish between 2D and 3D objects ➡ Identifying whether an object rolls or slides.	**Intellectual development** Independent thinking. Analytical ability Observation Concentration Comparison	6

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art/ Technology Integration/Experiential learning.	Learning outcomes	Integrated values	No. of periods for each chapter
JULY 19 DAYS/ 19PERIODS **Periodic Test-1 (10th July- 17th July)** **REVISION**	**UNIT- 2** **ADDITION (page no. 19 to 32)** **Cross Curricular Connect (EVS)** • Communication and Collaborations. • Counting the number of seeds in different fruits.	➡ Addition of 2 digit number with 2 digit number ➡ Addition of 2 digit number with 2 digit number (with regrouping) ➡ Addition of 3 digit numbers with 2 digir numbers ➡ Adding three 1 digit numbers ➡ Adding three 2 digit numbers ➡ Adding three 2 digit numbers (with regrouping) ➡ Addition facts ➡ Word problems	✓ Art Integration ✓ Addition wheel and square grid ✓ Addition game using bowls and buttons ✓ Experiential learning (pg. 30) ✓ Skill practice based on addition ✓ Story sums on real life situations. ✓ Dice (game to learn addition) ✓ Sports Integration ✓ Addition on number line(jumping forward) ✓ IT Integration ✓ Videos on addition **Lab activity:3** Using abacus **REVISION STATION (pg 31)** **WORKSHEET (pg 32)** **CLASS TEST 3**	➡ Recalling ➡ Learn to add ➡ 2 digit with 2 digit ➡ 2 digit with 2 digit (regrouping) ➡ Three 2 digit numbers ➡ Find the sum of a 3 digit and 2 digit numbers ➡ Read and understand word problems ➡ Solves simple daily life problems based on addition of three 2 digit numbers with and without regrouping.	➡ Intellectual development ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification	10 2

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art / sports/Technology Integration/Experiential learning.	Learning outcomes	Integrated values	No. of periods for each chapter
	UNIT- 11 **PATTERNS** **(page no.153 to 161)** **Cross Curricular Connect** • Art integrate learning • Draw designs and make Rangoli.	➡ Number patterns ➡ Patterns around us ➡ Alphabet patterns ➡ Picture patterns ➡ Patterns by stamping and vegetables.	✓ **Art Integration** ✓ Make garlands using beads and flowers. ✓ Draw designs and make Rangoli. ✓ Make patterns using leaves or bindis. ✓ Make patterns using thumb impressions. ✓ **Experiential learning (pg 160)** ✓ Finding patterns around them. ✓ Design dresses on their own ✓ **IT Integration** ✓ Videos on patterns, Rangoli designs and flower designs **Lab activity:5** Using different shapes **REVISION STATION (pg 161)** **CLASS TEST 4**	➡ Learn to understand about different patterns ➡ Complete the pattern- with numbers, alphabets and pictures ➡ Learn to draw designs or rangoli ➡ Learn to complete missing numbers, letters and pictures. ➡ Create patterns	Aesthetics : Appreciation of beauty **Independent thinking** ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind ➡ Cultural motivation ➡ Involvement in drawing **Intellectual development** ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification ➡ Creativity and Imagination	7 7

AUGUST 18 DAYS/ 18 PERIODS **PT- 3 16th AUGUST TO 23rd AUGUST**	**UNIT- 3 SUBTRACTION(page no. 33 to 41)** **Cross Curricular Connect** • Sports integrate learning • Running race MULTIPLICATION TABLE OF 2,3,4	➡ Subtraction of 2 digit number ➡ 1 digit number from 2 digit number (with regrouping) ➡ 2 digit number from a 2 digit number (with regrouping) ➡ Word problems ➡ Subtraction of 2- digit numbers ➡ Subtraction facts ➡ Checking subtraction using addition	**Art Integration** ✓ Subtraction game ✓ **Experiential learning (pg 39)** ✓ Skill practice based on subtraction. ✓ Subtraction on the grid ✓ Crossword puzzle ✓ Quiz ✓ **Sports Integration** ✓ Number games on subtraction using number line.(jumping backward) ✓ **IT Integration-** Interactive worksheet on subtraction **Lab activity:6** Using place value cubes and rods **REVISION STATION (pg 40)** **CLASS TEST 5** **WORKSHEET (pg 41)** **Art Integration**	➡ Recalling ➡ Learn to subtract • 1 digit from 2 digit • 2 digit from 2 digit (regrouping) ➡ Learn to do addition and subtraction together ➡ Explain subtraction facts. ➡ Read and understand word problems ➡ Solve daily life situations based on subtraction of two digit numbers	**Intellectual development** ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification **Independent thinking** ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind	7

	<u>UNIT- 6</u> **NUMBERS UPTO 1000(page no.76 to 93)**	• Numbers and number names up to 1000 • Numbers in Hundreds • Forming numbers • Numbers on Abacus • Expanded form • Place value • Numbers before , after and in between • Comparing numbers • Ascending and Descending orders • Number Combination	➢ Join the dots using numbers ➢ Model of abacus ➢ **Experiential learning (pg 91)** ➢ Abacus game ➢ Game- odd/even	• Learn to count and write • Write numbers from 0 to 1000 in numerals and in words • Write the numbers in ascending and descending orders. • Learn to compare. • Learn the number concept • Identifying numbers and number names. • Usage of abacus		11

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art/sports/ Technology Integration/Experiential learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**

			Sports Integration ➢ Rearrange themselves using placards to form different numbers. **REVISION STATION (pg 92)** **CLASS TEST 6** **WORKSHEET (pg 93)** **Lab activity:7** Using place value cubes and rods	➢ Learn to count and write ➢ Learn to compare.	**Intellectual development** ➢ Analytical ability ➢ Observation ➢ Concentration ➢ Comparison ➢ Classification ➢ Independent thinking ➢ Logic & reason ➢ Intellectual conviction ➢ Training the mind	
SEPTEMBER 17 DAYS/17 PERIODS	ADDITION AND SUBTRACTION N UPTO 999 (page no.95 to 112)	Addition a 3 digit number with a 2 digit number (with and without regrouping) Adding a 3 digit number with a 3 digit number (with & without regrouping) Word problem Subtraction 2 digit number from a 3 digit number (with & without regrouping) Word problems Placement of numbers	➢ Art Integration ➢ Draw and shade grids to solve addition and subtraction ➢ Eperiential learning (pg 109 & 110) ➢ Magic triangle ➢ Abacus games Abacus,marbles and beads, different objects ➢ Sports Integration ➢ Number games using number strips	LEARNING OUTCOME ➢ Perform subtraction with or without regrouping ➢ Solve word problems on addititon and subtraction ➢ Place numbers correctly in the columns to add or subtract.	➢ Intellectual development ➢ Analytical ability ➢ Observation ➢ Concentration ➢ Comparison ➢ Classification ➢ Creativity and Imagination ➢ Independent thinking ➢ Logic & reason ➢ Intellectual conviction ➢ Training the mind Universal outlo	10

REVISION			Lab activity:10 ➢ Addition wheel ➢ Subtraction wheel ➡ **REVISION STATION (PG 111)** **CLASS TEST 7** **WORKSHEET (PG 112)**			7

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art/Sports/ Technology Integration/Experiential learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
OCTOBER 19 DAYS/ 19 PERIODS	**<u>UNIT- 4</u> MULTIPLICATION(page no.43 to 62)**	Skip counting in 2s Multiplication table	➢ Art Integration	➡ Learn to count in groups	Intellectual development ➕ Analytical ability ➕ Observation ➕ Concentration	8

TERM 1 **5 th OCT to 19th OCT** **REVISION**	**Cross Curricular Connect** Environmental literacy. Planting saplings on wenvinmen	2 to 10 Multiplication facts	➢ Observe and complete the pattern ➢ Representation of multiplication using pictures. ➢ Experiential learning ➢ Cricket score calculation ➢ Repeated addition to get the multiplication fact. ➢ Sports Integration ➢ Skip counting game ➢ Marbles and jug ➢ IT Integration ➢ .Videos on multiplication. ➢ Lab activity:8 ➢ Using multiplication sticks ➢ REVISION STATION (pg 61) CLASS TEST 9 WORKSHEET (pg 62) PROJECT : Webby numbers	understand the concept of multiplication Learn repeated addition Perform multiplication withoutregrouping Learn to do multiplication on a number strip Learn the multiplication tables from 2 to10 Learn to order property of multiplication Learn to multiply Word problems	Comparison Classification Creativity and Imagination Independent thinking Logic & reason Intellectual conviction Training the mind Universal outlook	3

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art/ Sport/IT Integration/*Experiential learning.*	Learning outcomes	Integrated values	No. of periods for each chapter
NOVEMBER 22 DAYS/ 22 PERIODS	**<u>UNIT – 8</u>** **MORE MULTIPLICATION (PG 113 – 126)**	➡ Patterns in tables ➡ Multiplication facts ➡ Multiplication without regrouping ➡ Multiplication with regrouping ➡ Multiplication by 10 ➡ Word problems	**Art Integration** ✓ Observe and complete the pattern ✓ Representation of multiplication using pictures. **Experiential learning** ✓ Cricket score calculation ✓ Repeated addition to get the multiplication fact. ✓ **Sports Integration** ✓ Skip counting game *Marbles and jug* ***IT Integration*** *.Videos on multiplication* **Lab activity:9** Using multiplication sticks, cups and beads **REVISION STATION (PG 125)** **CLASS TEST 10** **WORKSHEET (PG 126)**	➡ Recognise patterns in multiplication tables. ➡ Analyse multiplication facts ➡ Performing multiplication without and with regrouping ➡ Determine the product when a number is multiplied by 10 and 100.	➡ Independent thinking ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind ➡ Independent thinking ➡ Logic & reason ➡ Intellectual conviction ➡ Training the mind	16

	UNIT 14 **DATA HANDLING** **(PG 181 – 188)**	➡ Data collection ➡ Data representation	**Art Integration** ➢ Compare two drawings with figures of different shapes and collect data on it. **Experiential learning (pg 181 & 182)** >Write the names of friends/places/things and write the number of same letters in them. > Count and write the number of letters from the given words. >Compare and collect data from a calendar and birthday chart. ***IT Integration*** *Interactive worksheets on Data handling* ***REVISION STATION (PG 187)*** **CLASS TEST 11** **WORKSHEET (PG 188)**	➡ Collect data by recording the number of objects or events ➡ Illustrate the data in the form of pictures and numbers or graphs. Learn to analysis data and illustrate the given information using pictures/ symbols	Intellectual development ➡ Independent thinking ➡ Analytical ability ➡ Observation ➡ Concentration ➡ Comparison ➡ Classification Universal outlook ➡ Recognizing commonalities as opposed to differences ○ Using discrimination by differentiating	6 10

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art/sports/ Technology Integration/Experiential learning	Learning outcomes	Integrated values	No. of periods for each chapter
DECEMBER **16 DAYS/ 16 PERIODS**	**UNIT 10 TIME (page no.162 to 171)**	Reading and writing time from a clock Days of the week Calendar Leap year	Art Integration ➢ Note the manufacturing date and expiry date of some products, ➢ Sports Integration ➢ Note down the time at the finishing point in sports events. ➢ IT- Days and months ➢ REVISION STATION (pg 170) **WORKSHEET (pg 171)** CLASS TEST 12	➢ Learn to read time from a clock. ➢ Identifying and tell time to half past, quarter past and quareter to an hour. ➢ Construct hands on the clock face to show time. ➢ Learn the names of days and months. ➢ Learn the number of days in a week. ➢ Learn the number of days in different months in a year. ➢ Learn the important dates (festivals and important days) ➢ Leap year	**Independent thinking.** **Logic and Reason** **Intellectual conviction** **Training the mind** **Intellectual assessment**	9

	UNIT-13 MONEY(page no. 172 to 180)	Exchanging Money Rupees and paise Addition of money Subtraction of money	Art Integration ➢ Role Play- Market ➢ tracing and shading of different types of coins. ➢ Experiential learning. ➢ (pg 178) ➢ Prepare a list on the ➢ amount needed for a given list of articles from a market. ➢ Forming rate menu for some toys. **CLASS TEST 13** **REVISION STATION (PG-180)**	➧ Identify common currency notes and coins ➧ Learn to put together small amount of ➧ Money. ➧ Write money in rupees and paise ➧ Perform addition and subtraction of money	**Intellectual development** **Analytical ability** **Observation.** **Concentration** **Comparison** **Classification** **Creativity and Imagination** **Independent thinking** **Logic & reason** **Intellectual conviction** **Training the mind** **Universal outlook**	7

Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Art/Sports/ Technology Integration/Experiential learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
JANUARY 22 DAYS/ 22 PERIODS **REVISION** **Periodic Test- 3 (8th JAN to 17th JAN)**	**UNIT 5** **EQUAL SHARING** **(page no. 63 to 75)** **Cross Curricular Connect** • English- ch-5 The four seasons • EVS-Ch-15 Seasons	**KEY CONCEPTS** ➡ Division as equal sharing ➡ Division as repeated subtraction ➡ Division using number strip ➡ Divisioin using multiplication tables ➡ Division by 1 and the number itself ➡ Division of 2 digit number by a 1 digit number (long division and short division method) (with and with regrouping)	**Art Integration** >Making rangoli with different shapes by dividing shapes equally and colour it Draw smileys using four dots for each smileys grid. **Experiential learning (PG 72)** >Sharing equally >Repeated subtraction >Skip counting game > Division using a number strip **IT Integration** Songs on division and related videos. **Lab activity:11** Use beads, hundred board and tokens. **REVISION STATION**	**LEARNING OUTCOME** ➡ Divide a given number of objects equally ➡ Evaluate division as repeated subtraction ➡ Solve division word problems ➡ Execute division of a 2digit number by 1 digit number	**Universal outlook** ➡ Recognizing commonalities as opposed to differences	15 4 3

			(PG 74) **CLASS TEST 14** **WORKSHEET (PG 75)**			

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Art/Sports/ Technology Integration/Experiential learning	Learning outcomes	Integrated values	No. of periods for each chapter
FEBRUARY **21DAYS/ 21PERIODS** **REVISION**	**UNIT 9 MEASUREMENT (page no. 127 to 137)** **Cross Curricular Connect** • EVS • Advantages of eating fruits everyday	➡ Length (standard & non standard units) ➡ Measuring using cm scale ➡ Weight (standard units of weight) Standard unit of capacity	**Art Integration** >Making a weigh balance by using their creativity **Experiential learning (pg 135)** >Measuring /collecting data on the grocery and spices required for a month. >Measure the objects in the classroom. >Measure the given amount of water with glasses of different sizes. **IT Integration** Videos on measurement. ✓ **Lab activity:12** ✓ weigh/ measure different objects ✓ Demonstrate the use of balance ✓ Demonstrate the use of beakers of different capacities ✓ Quiz *Common balance, Scale,*	**LEARNING OUTCOMES** ➡ Measure length in metres and centimeteres ➡ Measure weight in kg & g ➡ Measure capacity in l & ml ➡ Assess and compare lengths , weights and capacities of objects.	**Intellectual development** Independent thinking Analytical ability Observation Concentration Comparison Classification **Universal outlook** Recognizing commonalities as opposed to differences Using discrimination by differentiating **Intellectual development** Analytical ability Observation Concentration Comparison Classification Creativity and Imagination **Independent thinking** Logic & reason Intellectual conviction Training the mind	11 10

			Measuring Jug **REVISION STATION (PG 136)** **WORKSHEET (PG 137)** **PROJECT:** Making a weigh balance by using their creativity			
MARCH			***ANNUAL EXAMINATION***			

CURRICULUM PLANNING 2023-2024(PALLAVUR / TATTAMANGALAM /KOLLENGODE)

Class: III **Subject:** Mathematics **Resource Material/ Text:** Maths Xpress **No. of Chapters : 12**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
JUNE 21days 21periods	Bridge course (Basic concepts) 1. Large Numbers (Pg no:1-15) Subject integration: 1.English Chapter 3 –Four dragons	➡ Four digit numbers ➡ Representation of numbers on abacus ➡ Number names ➡ Missing numbers ➡ Place value and face value ➡ Expanded form ➡ Successor and predecessor ➡ Comparison of 4 digit numbers ➡ Forming numbers using digits ➡ Even and odd number ➡ Rounding off number ➡ Ascending and descending order	Lab activity: ➡ Place value using cubes and rods. ➡ Formation of numbers using number tokens. ➡ Odd and even numbers using ➡ Star tokens ➡ Fill in the grid with corresponding numerals. AI- Making model of Abacus. EL-Number games using dice	➡ Acquire the knowledge about four digit numbers in figures and its number names. ➡ Understands the place value and face value of digits in the given number. ➡ Acquire the knowledge of expanded form of 4 digit numbers ➡ Able to identify the successor and predecessor of a given number ➡ Acquire the knowledge of	➡ Intellectual development . ➡ Concentration ➡ Physical development. ➡ Observation skill.	6 10

	Multiplication tables 1-6		**Revision station (pg no.16)** **Class test 1.** **Worksheet (pg no.17)**	comparing large numbers ➡ Acquire the knowledge of forming numbers using the given digits ➡ Able to identify even and odd numbers ➡ Acquire the knowledge of rounding off numbers to nearest tens and hundreds		
JUNE **21days/** **21 periods**	2. Shapes . (pg.no:99-109) Subject integration: 1.EVS- Home sweet home	➡ Three dimensional shapes ➡ Edges, faces and vertices ➡ Straight and curved lines. ➡ Plane figures ➡ Point, line segment, line and ray ➡ Maps, Tangram	➡ Lab activity -Creating shapes using tangrams. ➡ Join the same letters with straight line. ➡ Identifying beautiful shapes in nature. ➡ Interpret simple maps. EL-Creating different pictures using mathematical shapes (candles , birds etc) AI - Making models of 3 D shapes	➡ Acquire the knowledge about 3 D shapes (edges, faces and corners) ➡ Able to identify the 3 D objects from their surroundings ➡ Able to identify straight and curved lines ➡ Able to distinguish between plane	➡ Intellectual development . ➡ Concentration ➡ Comparison ➡ Discrimination skill ➡ Physical development. ➡ Observation skill .	5

			Sports Integration – Forming yoga postures using different mathematical shapes. Revision station(pg no.110) **Class test 2** **Worksheet**	and solid figures ➡ Acquires the knowledge of point, line, line segment and ray. ➡ Identifies and makes 2D shapes by paper folding ,paper cutting on a dot grid using straight lines . ➡ Create figures using tangram pieces. ➡ Study and interpret simple maps.		
JULY 19days/ 19 periods	3. Addition. (pg.no:18-33) Subject Integration EVS- Ch-4 My Family—class 1 Revision for PT1	➡ Addition of 3 and 4 digit numbers. ➡ Properties of addition. ➡ Word problems ➡ Estimating sums.	Lab Activity : ➡ Number formation using 4 dice. EL: Addition of numbers using number cards. AI – Addition using a map.	➡ Acquire the knowledge of addition of 3 and 4 digit numbers ➡ Able to solve word problems using appropriate operation ➡ Acquire the knowledge of estimating the	➡ Intellectual kindling takes place through ➡ Observation ➡ Concentration ➡ Comparison and ➡ Analytical ability ➡ Physical Development.	10

	Periodic Test 1- July 10th to 17th Multiplication tables 1-8 4.Data handling (pg.no:174-181)	➡ Introduction to Pictograph ➡ Interpreting data from a pictograph. ➡ Constructing a pictograph ➡ Introduction to bar graph ➡ Interpreting data from a bargraph ➡ Constructing a bargraph	**Revision station(pg no. 34)** **Worksheet(pg no.35)** Class test 3 Lab Activity ➡ Draw a pictograph showing the birthdays of your classmates ➡ Draw bar graphs showing their favourite sport and favourite pet. . AI – Construct a bar graph using the ages of your family members. EL- constructing a pictograph Framing their own questions. **Worksheet(pg no.183)** **Revision station (pg no.182)** Class test 4.	numbers to the nearest tens and find its sum. ➡ Solves simple daily life problems using addition ➡ State the properties of addition. ➡ Able to collect, record the data and interpret it through the pictograph and bar graph.	➡ Intellectual kindling takes place through ➡ Observation ➡ Concentration ➡ Comparison and ➡ Analytical ability ➡ Develops the skill of drawing	3 6
AUGUST 18days 18periods	5.Subtraction. (Pageno:36-50)	➡ Subtraction of 3 and 4 digit numbers. ➡ Properties of subtraction.	Lab Activity : ➡ Number formation using 4 dice. ➡ Patterns in maths-	➡ Acquire the knowledge of subtraction of 3 and 4 digit numbers.	➡ Intellectual kindling takes place through Observation Concentration	12

	Revision for PT 2 Periodic Test 2- Aug 16th to 23rd Multiplication tables 1-10 6.Patterns and symmetry. (pg.no:111-118) Subject Integration EVS- Ch-13 Festivals & celebration—class 1 Art	➡ Word problems ➡ Estimating differences. ➡ Use addition to check the difference. ➡ Mixed problems on addition and subtraction. ➡ Types of patterns ➡ Repeating patterns ➡ Increasing and decreasing pattern. ➡ Tiling pattern	Subtracting 10,100, and 1000 from numbers. EL: ➡ Subtraction of numbers using number cards. ➡ AI Revision station (pgno.51) Worksheet (pg no.52) Class Test 5 Lab Activity 1: ➡ Make patterns with numbers and letters ➡ Colour the tile to make pattern ➡ Tiling patterns using shapes. ➡ Class test AI - Making patterns with Ice cream sticks and toothpicks EL- Creating Tiling patterns .	➡ Able to solve word problems using appropriate operation. ➡ Acquire the knowledge of estimating the numbers to the nearest tens and find its difference. ➡ Solves simple daily life problems using subtraction ➡ State the properties of subtraction. ➡ Check subtraction using addition. ➡ Identifies the rules behind the patterns ➡ Recognise symmetric	Comparison ➡ Analytical ability ➡ Physical Development. ➡ Intellectual development ➡ Observation of different patterns and symmetry in nature	6

			Revision station(pg no.119) Work sheet(pg no.120) **Project :Make symmetrical designs** Class test 6	figures and their lines of symmetry.		

SEPTEMBER **17 days/** **17 periods**	7.Multiplication (pg.no:53-66) Revision for Term 1	➡ Multiplication of- 2-digit number by a 1 and 2- digit number ➡ 3-digit number by a 1 and 2- digit number ➡ 3-digit number by a 10, 100 and 1000 Word problems	Lab Activity 1: ➡ Multiplication table using straws and sticks. ➡ Multiplication using Multiplication board.	➡ Understands multiplication as repeated addition ➡ Acquire the knowledge of product of numbers ➡ Compute the product of 3-digit numbers by 1 and 2 digit numbers. ➡ Develops the skill of solving word problems ➡ State properties of multiplication..	➡ Intellectual development ➡ Observation ➡ Concentration	12 5
OCTOBER **19days/19periods**	Revision for Term 1(contd) Term 1 assessment (Oct 5th to 19th)		Lab Activity 2: Lattice Algorithm AI – Waldorf multiplication flower. EL- Learn multiplication with marbles.		➡ Comparison and analytical ability .	4 15

NOVEMBER 22Days/22 periods.	8. Time (pg.no:144-154) Subject Integration EVS –Ch -17 Earth & the Sky GK- Festivals (class 1) 9. Division (pg.no:69-83)	➡ Introduction to time ➡ Reading the time ➡ Hour-Minute ➡ Quarter past time ➡ Quarter to time ➡ Reading time to the exact minute ➡ Calendar ➡ Days of a week ➡ Months of a year ➡ Writing dates in day/month/year form ➡ Time line. ➡ Division as repeated subtraction ➡ Division facts using multiplication table ➡ Division using number line ➡ Properties of	Revision station(pg no.67) Worksheet(pg no.68) Class Test7 Lab Activity 1: ➡ Make a calendar of your birth month ➡ Prepare a timeline on the major life events of a famous personality AI- Make a model of a clock. EL – Origin of time and finding time with sun. Revision station (pg no. 155) Work sheet **Project :page no: 174** Class test 8 ➡ Lab Activity : Share the beads equally. ➡ To make numberstrips	➡ Acquire the knowledge of the different hands in a clock ➡ Able to read and write time ➡ Able to read time in terms of quarter past and quarter to ➡ Able to read and write time to the exact minute ➡ Able to read the date, month from the calendar. ➡ Write events in chronological order. ➡ Learns how to divide numbers by sharing equally	➡ Intellectual kindling takes Observation Concentration Comparison ➡ Intellectual development ➡ Observation	10 12

DECEMBER **16Days/16periods**	9.Division (Cont) Sub.Integration English- ch-5 The four seasons EVS-Ch-15 Seasons (class 2) 10. Money (Pg.no:156-170) EVS- Ch-10 Our Neighbourhood CLASS 2 (Excluding division of money)	division ➡ Division of a-2-digit number by a one digit number ➡ 3-digit number by a one digit number ➡ Introduction to Remainder ➡ Division of a 2-digit number by a one digit number (with remainder) ➡ Quotient with zero. ➡ Dividing a 4-digit number by 1- digit number ➡ Division by 10 . ➡ Verification of division using multiplication tables. ➡ (Dividend= Quotient * Divisor + Remainder) ➡ Word problems ➡ Expressing money in short and long	➡ (Division using numberstrips) ➡ Learns the concept of division using dotted sheet and sketch pens. AI – Division flower. EL -Division by grouping. Revision station (pg no.98) worksheet (pg no.98) Classtest 9	➡ Learns division through multiplication tables ➡ Learns division using number line ➡ Acquire the knowledge of properties of division ➡ Find out the quotient when 2 digit, 3 digit and 4 digit numbers are divided by a 1 – digit number. ➡ Acquires the knowledge of Dividend= Quotient * Divisor + Remainder ➡ Acquires the knowledge of Word problems	Concentration and analytical ability ➡ Intellectual development ➡ Observation ➡ Concentration Comparison ➡ Analytical ability ➡ Discrimination ➡ Analytical ability	11 5

JANUARY **22Days** **/22Periods** **Revision** **PT3 (2nd week)**	11.Fractions (Pg.no:87-97)	forms. ➡ Conversion of- Rupees to paise- Paise to rupees ➡ Addition of money ➡ Subtraction of money ➡ Multiplication. ➡ Bills. ➡ word problems ➡ Introduction to fractions ➡ Fraction by shading ➡ Fraction of a collection ➡ Numerator and denominator ➡ Properties of fraction ➡ Word problems.	➡ Collect different types of computerised and hand-written bills AI_Making Money book EL-Bill preparation Revision station(pg no.171) Worksheet (pg.no172) **Project: page no:170** Class test 10 Lab Activity 1: ➡ Fraction by paper folding ➡ Shading the given figures as directed AI-Making fraction fish , fraction butterfly by cutting colour papers. EL – Sunday menu (salad preparation ingredients) **Worksheet(pg no.98)** **Revision station(pg no.98)**	➡ Identifies different types of currency notes and coins ➡ Are able to convert rupees to paise and vice versa ➡ Acquire the knowledge of addition,subtraction and multiplication of money ➡ Able to apply the concepts of currency in solving word problems ➡ Able to prepare a bill ➡ Identifies the appropriate fraction by looking at the given shaded figure ➡ Acquires the	➡ Intellectual development ➡ Observation ➡ Concentration Comparison ➡ Analytical ability ➡ Intellectual kindling takes place through Observation Concentration Comparison	10 5

FEBRUARY 21days/ 21periods	12.Metric Measures (pg.no:122-141) 12.Metric Measures(cont.) Subject integration : Hindi : chapter -8	➡ Standard units of measuring length ➡ Tools used for measuring length ➡ Other standard units for measuring length ➡ Conversion of units ➡ -metre into centimetre ➡ -centimetre into metre and centimetre ➡ -Kilometres into metres ➡ -Metres into kilometres and metres ➡ Standard units of measuring weight ➡ Tools used for measuring weight	Class test 11 EI – Finding length of different items in box (pen , pencil etc) Lab Activity: ➡ Finding estimated	knowledge of numerator and denominator of a given fraction ➡ Define the properties of fraction. ➡ Solve word problems based on fractions ➡ Define metric units of measurements – length, weight and capacity. ➡ Convert the units of length weight and capacity from one unit to another.	➡ Integrated development ➡ Intellectual development ➡ Observation ➡ Concentration Comparison and analytical ability	7 10

Term 2 Revision MARCH (23 days) Term 2 Assessment		➡ Conversion of units ➡ -Kilograms into Grams ➡ -Grams into Kilograms and Grams ➡ Standard units of measuring capacity ➡ Tools used for measuring capacity ➡ Conversion of units ➡ -Litres into Millilitres ➡ -Millitres into litres and millitres ➡ Addition and subtraction of measures of length,weight and capacity.	and actual weight of object using standard units g/kg using simple balance. Making an instrument used for measuring. **EL:** **Finding capacity using containers of different capacities.** **AI – Draw containers of different capacities.** Creating word problems related to measurements from their daily life.. Class test 12 Worksheet(pg no.143) **Project: page no:141** Revision station(pg no.142) ANNUAL EXAMINATION	➡ Perform addition and subtraction on the measures of length ➡ ,weight and capacity		11 23 days

CURRICULAM PLANNING 2023- 2024(PALLAVUR/ TATTAMANGALAM/KOLLENGODE)

CLASS: IV SUBJECT: .MATHEMATICS RESOURCE MATERIAL/ TEXT: Maths Xpress NO. OF UNITS/CHAPTER: 14

MONTH /NO. OF WORKING DAYS / NO, OF PERIODS	UNIT /CHAPTER/SUBTHEME	KEYCONCEPTS	ACTIVITIES /PRACTICALS/ TECHNOLOGY INTEGRATION	LEARNING OUTCOMES	INTEGRATED VALUES	NO. OF PERIODS FOR EACH CHAPTER
JUNE 21Days/ 21Periods	Bridge course (Basic concepts) 1.Large numbers (pg.no:1-17)	➡ Five and six digit numbers ➡ Representation of numbers on abacus ➡ Number names ➡ Missing numbers ➡ Place value and face value ➡ Expanded and short forms ➡ Successor and predecessor ➡ Comparison of numbers ➡ Forming numbers using digits ➡ Rounding off number ➡ Ascending and descending order ➡ Roman numerals	Lab activity: ➡ Place value using cubes and rods. ➡ Formation of numbers using number tokens. ➡ Fill in the grid with correspondin g numerals. AI- Making model of Abacus. EL-Number games using dice Revision station(pg no.18) Worksheet(pg no.19) Class test-1	➡ Write 5 digit and 6 ndigit number ➡ Calculate the place value and face value of digits ina number ➡ Compare numbers upto 9,99,999 ➡ Form greatest and smallest numbers using 5 and 6 digit numbers. ➡ Round off the numbers to the nearest tens, hundreds and thousands ➡ Define roman numerals	Intellectual development . Concentration Physical development. Observation skill.	**4** **10**

JUNE 21Days/ 21Periods	2.Patterns and Symmetry (pg.no:126-135) Subject integration : Art – design, symmetrical/ traditional pookalam.	➡ Symmetric figures around us ➡ Line of symmetry ➡ Symmetry in geometrical shapes ➡ Reflection and symmetry ➡ Number patterns ➡ Picture patterns ➡ Pattern in multiplication ➡ Missing patterns ➡ Number tower ➡ Magic triangles ➡ Secret messages	Lab activity:Making pictures with shapes. (Tangrams) EL- Making symmetrical pictures using white paper and ink. AI –Find symmetric figures around us and make an album. **Worksheet - Revision station(pg no.136)** **Class test-2**	➡ Identify symmetry around us ➡ Learns line of symmetry ➡ Learns mirror halves and rotational symmetry ➡ Identifies different types of patterns ➡ Learns more interesting patterns ➡ Patterns in nature	➡ Intellectual development ➡ Observation ➡ Classification ➡ Comparison ➡ Abstract thinking ➡ Creative thinking ➡ Develops Aesthetic sense ➡ Abstract thinking ➡ Creative thinking ➡ Develops Aesthetic sense	**4**
JUNE 21Days/ 21Periods	3.Addition and Subtraction (pg.no:20-35) Subject Integration (CLASS 1) • EVS- Ch-4 My Family Subject Integration (CLASS 2) • EVS- Ch-4 My Family Multiplication	➡ Revision of 4 digit numbers Addition and subtraction. ➡ Addition and subtraction of 5&6 digit numbers, ➡ Properties of addition and subtraction.	Lab Activity: Addition of 5 and 6 digit numbers EL- Find out the phone numbers of 5 students in your group and then find the sum of that numbers. AI – Addition wheel (working model or still model).	➡ Learns addition and subtraction of 5 and 6 digit numbers. ➡ State the properties of addition and subtraction. ➡ Interpretation of word problems Applies in daily life ➡ Learns the concept of estimation	➡ Intellectual development through observation concentration, Comparison, Imagination ➡ Abstract thinking and analytical ability	**3**

	tables 1-10					
July 19Days / 19Periods **PT1** **(10^{th}-17^{th})**	Addition and Subtraction (cont.) Multiplication tables 1-15 REVISION	➡ Checking subtraction using addition. ➡ Estimation of sums and difference. ➡ Story sums .	**Revision station(pg no.36)** **Worksheet(pg no.37)** **Class Test -3**			**6** **3**
July 19Days / 19Periods	4.Multiplication (pg.no:38-50)	➡ Properties of multiplication ➡ Multiplication of a number by 100,1000 and 10,000. ➡ Multiplication using grids. ➡ Multiplication of 3-digit number by a 3-digit number,4-digitNumber by a 1 and 2-digit number. ➡ Word problems ➡ Estimating the product. *Revision station (Page no.51)* *Worksheet(page no.52)* *Project :page no:50* *Class test:4*	AI-Waldorf multiplication flower. EL. Multiplication array. Lab Activity - Multiplication using straws. Make multiplication table of 20 and 30	➡ Acquires the knowledge of multiplication of large numbers ➡ State the properties of multiplication ➡ Formulate the multiplication tables from 11 to 20. ➡ Estimate the product of two numbers. ➡ Students are able to apply the concept of multiplication in solving word problems	➡ Intellectual development through observation Comparison ➡ Abstract thinking ➡ Concentration and analytical ability ➡ Skills in computation	**10**

August 18 days/ 18 periods	5.Data Handling (pg.no:195-202) Subject integration : Evs- Blow hot, Blow cold, Family and relationship.	➡ Interpretation of picture graph. ➡ Interpretation of bar graph. ➡ Drawing bar graph using the data given. ➡ Pie chart *Revision station:* *(Page no:203)* *Worksheet:* *(page no.204)* *Class test:5*	AI-Making Pie chart EL- Collect different types of graphs from old magazines or news papers	➡ To acquire the knowledge of different types of graphs ➡ Interpretation of graphs. ➡ Learns to draw bar graph and pie chart	➡ Intellectual development through observation ,concentration, Comparison ➡ Abstract thinking	**4**
August 18days/ 18 periods	6. The world of shapes (pg.no:113-135) Subject integration : Art –Geometrical decorative practical.	➡ Revision of basic geometrical shapes. ➡ Different views of the same objects. ➡ Visualizing block arrangements. ➡ 3-D shapes on dot paper ➡ Basic geometrical ideas. ➡ About point ,line line segments and ray ➡ Closed and open curve ➡ Construction of line segments using a ruler ➡ Polygons –triangles and quadrilaterals ➡ Circles –parts of the circle and construction of a circle ➡ Tangrams *Revision station:* *(page no.125)* *Worksheet:* *Project :page no:120,124* *Class test:6*	Lab Activity: 3-D shapes on dot paper Net of 3D shapes. AI- Making 3D shapes . EL- Find Real life examples for 3D shapes , identify the number of faces ,edges and corners, Tangrams. Sports Integration- Forming different mathematical shapes using yoga postures.	➡ To acquire the knowledge of different shapes ➡ Measure and draw line segments ➡ Open and closed figures. ➡ Visualise solid shapes ➡ Classifies different figures ➡ Acquires the knowledge of construction of geometric figures. ➡ Draw a circle using compass ➡ Use tangram pieces to create different shapes. ➡ Identification of centre, radius	➡ Intellectual development through observation ,concentration, Comparison, ➡ Abstract thinking ➡ Skills of drawing and measuring	**6**

				and diameter of a circle.		
August 18 days 18periods	Revision PT2(16th to 23rd) 7.Division (pg.no:53-65)	➡ Division of 3 and 4 digit number by 1 and 2 digit number ➡ Division by 10,100,,1000 ➡ Properties of division ➡ Estimating quotient ➡ Word problems	Lab Activity: Division as equal distribution. AI – Division clip cards. EL-Division by sharing.	➡ Compute the quotient when a 3- digit number is divided by 2-digit number. ➡ Division of 4-digit number by 1 and 2 digit number ➡ Perform the division by 10 ,100 and 1000 ➡ State the properties of divison. ➡ Estimate the quotient.	➡ Intellectual development ➡ Observation ➡ Classification ➡ Comparison	**8**
September 17 days 17 periods	Division (cont.)					**8**
September 17days /17days	8.Perimeter and Area (pg.no:155-165)	➡ Perimeter of closed figures. ➡ Area of closed figures. Revision station	EL- Find out the area of your palm using squared sheet of	➡ Acquires the knowledge of ➡ perimeter	➡ Intellectual kindling takes place by observation,	4

		(page no:166) Worksheet (page no.167) Revision for Term 1	paper. AI – Make a Robot using mathematical shapes and find its perimeter.	➡ learns to find area and perimeter on square grid paper	➡ Comparison ,and concentration	5
October 19days/19 periods	Term 1 assessment (Oct 5th – Oct19th) 9.Factors and multiples (pg.no:69-81)	Revision for Term 1(cont) ➡ Revision of multiplication facts ➡ Factorisation ➡ Factor tree ➡ Highest common factor ➡ Prime and composite numbers	AI: Making Factor tree. EL: Multiples of 9 using fingers Hands on activity.	➡ Acquires the knowledge of multiplication facts ➡ HCF ➡ Learns to find ➡ Highest common factor ➡ Prime and composite numbers ➡ understands ➡ Even and Odd numbers ➡ Applies their knowledge in finding the ➡ Multiples	➡ Intellectual development through observation ,concentration, Comparison, ➡ Abstract thinking and analytical ability ➡ Skills in computation	**3** **1**
November 22 days/ 22periods	Factors and multiples (cont.)	➡ Even and Odd numbers ➡ Multiples ➡ Common multiples ➡ Least common multiples		➡ Common multiples ➡ Least common multiples		**10**

		➡ Divisibility Test by 2,3,5,9 and 10		➡ Uses the divisibility Test by 2,3,5,9 and 10 to solve problems		
	10.Fractions (pg.no:84-104)	➡ Revision of fractions (Part of a whole) ➡ Fraction of a collection ➡ Types of fractions ➡ Equivalent fractions ➡ Reducing fractions to its simplest form ➡ Comparing like fractions ➡ Addition of like fractions ➡ Subtraction of like fractions ➡ Proper and improper fraction ➡ Mixed fraction ➡ Converting a mixed fraction into improper fraction. ➡ Fractions on a number line. Revision station (page no.105) Worksheet (page no.106) Class test:10	Lab Activity: Equivalent fractions using fraction strips (Lab kit) AI- making fraction pictures. EL- Addition and subtraction of like fractions using coloured strips.	➡ Acquires the knowledge of fractions and different types of fractions ➡ understands ➡ Equivalent fractions and ➡ Reducing fractions to its simplest form ➡ Develops the skill of Addition of like fractions &Subtraction of like fractions ➡ Define proper, improper and mixed fractions ➡ Represent fractions on a number line.	➡ Intellectual development through observation ,concentration, Comparison, ➡ Abstract thinking and analytical ability ➡ Skills in computation	**8**
November 22 days 22 periods	11.Money (Excluding division of money)	➡ Indian currency ➡ Conversion of money ➡ Addition and subtraction of money	EL- Prepare a bill based on vegetables purchased by your family during a	➡ Acquires the knowledge of different denominations	➡ Intellectual development through observation	4

	(pg.no:182-192)		week. AI- Making money book by tracing coins.	of Indian currencies ➡ Learns to convert money ➡ Develops the skill of Addition and subtraction Of money ➡ Understands how to prepare a bill& ➡ Understands the practical utility of money	,concentration, Comparison, ➡ Abstract thinking	
December 16days 16 periods	11.Money(contd)	➡ Story sums ➡ Bill preparation Revision station: (page no:193) Worksheet:194) Project: page no: 192 Class test:11				**3**
December 16days 16 periods	12. Decimals. (pg.no:107-110)	➡ Introduction to decimals Revision station (Page no:111) Class test:12	AI:Represent decimals pictorially. EL:Make a place value chart for decmals.	➡ Define tenths, hundrendths and thousandths ➡ Represent decimals as fractions.	➡ Intellectual development through observation ,concentration, Comparison, ➡ Abstract thinking	**4**

December 16days/ 16 periods	13.Time Subject integration : Music- Rhythm. (pg.no:169-179)	➡ Reading clock face ➡ Relation between hour, minute and second, ➡ Time in am and pm ➡ Time duration in hours and minutes ➡ 24 hour clock time ➡ Calendar ➡ Date format ➡ Time duration in days ➡ Finding number of days ➡ Time line Revision station: (page no:180) Worksheet:181) Project: page no:179 Class test:13	EL- Draw the time line to describe a day in your life. Lab Activity: Find out 5 places where we use 24 hour clock time and record it in your note book AI – Making a 24 hour clock. Make a calendar of the month	➡ Learns to read time ➡ Understands the relationship between different units of time ➡ Differentiate between 12 hour clock time and 24 hour clock time ➡ Acquires the knowledge of Date format ➡ Time duration in days ➡ Make a time line	➡ Independent thinking. ➡ BMI co ordination ➡ Comparison, ➡ Abstract thinking ➡ Concentration and analytical ability & ➡ Universal out look	**9**
January 22 days/ 22 periods	14.Metric measures (pg.no:138-152)	➡ Converting km to metre ➡ Conversion of larger units to smaller units and vice versa ➡ Addition and subtraction of lengths ➡ Story problems ➡ Conversion of units of measures of weights ➡ Addition and subtraction of measures of weights ➡ Story problems ➡ Conversion of units of	EL: Measure the dimensions of the class room Activity: Lab activity using weighing machine & Measuring cups. AI- Making a common balance.	➡ Acquires the knowledge of units of measures of length mass and capacity ➡ Learns to convert units of measures ➡ Develops the skill of Addition and subtraction of measures	➡ Intellectual development through observation ,concentration, Comparison, ➡ Abstract thinking	**15**

PT3 (2nd week of January)		measures of capacity ➡ Addition and subtraction of measures of capacity ➡ Story problems Revision station (page no:153) Worksheet: (page no:154) Class test:14		➡ Understands the practical utility ➡ Estimates the length of an object /distance between 2 locations . ➡ Weight of various objects ,volume of liquid etc and verifies them by actual measurements		**8**
February 21 days/21 periods	Revision for term 2 assessment					**21**
March 23 days	**ANNUAL EXAMINATION**					**23**

CURRICULUM PLANNING 2023-2024 (PALLAVUR / TATTAMANGALAM /KOLLENGODE)

Class: V **Subject:** Mathematics **Resource Material/ Text:** Maths Xpress **No. of Chapters: 14**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Lab Activities /Practical's/ Technology Integration/Art Integration/Experiential Learning Evaluation	Learning outcomes	Integrated values	No. of periods for each chapter
	BRIDGE COURSE					5
JUNE 21/21 **PROJECT: Collection of Projects Term 1**	1. **MORE ON LARGE NUMBERS** **Cross curricular connect** **Information literacy : Light travels faster than sound** **MULTIPLICATION TABLES 1 TO 13**	➡ Indian and international system of numeration. ➡ Expanded form of numbers. ➡ Placevalue ➡ Comparison of numbers ➡ Forming numbers ➡ Round off large numbers ➡ Roman numerals ➡ Calculate the sum and the difference of Roman numerals	Lab Activity :1 ➕ To compare large numbers using an abacus (**pageno:6)** Experiential learning ➕ To reiterate the place value of a digit in a number **(page no : 9)** REVISION STATION:1 Page no: 17 WORKSHEET :1 Page no: 18 **CLASS TEST -1** **MULTIPLICATION TABLE 1 TO 13**	➡ Describe the Indian system and the international system of numeration ➡ Write the numerals and number names in the Indian and the International number system ➡ Write the expanded form of large numbers ➡ Compare and order large numbers ➡ Form the largest and the smallest numbers using the given digits ➡ Round off large numbers ➡ Recall Roman numerals ➡ Calculate the sum and the difference of Roman numerals	➕ Intellectual development ➕ Concentration ➕ Physical ➕ Development. ➕ Observation skill.	**11**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Lab Activities /Practical's/ Technology Integration/Art Integration/Experiential Learning Evaluation	Learning outcomes	Integrated values	No. of periods for each chapter
JUNE 21/21	**2. PATTERNS AND SYMMETRY** **Cross curricular connect** **Art - Design**	➡ Different types of patterns ➡ Symmetric figures ➡ Line of symmetry	Lab Activity 2 : Color the given picture to form a beautiful symmetrical pattern **Art integration** To create symmetrical figures using paper , ink **page no :132**	➡ Recognize different types of patterns in numbers ➡ Identify symmetric figures and their lines of symmetry	➡ Intellectual development ➡ Observation of different symmetric patterns in nature ➡ Observation and classification of symmetrical shapes ➡ Concentration ➡ Imagination	**5**
JULY 19/19	**PATTERNS AND SYMMETRY** **Cross curricular connect** **Art – Design** **page nu: 135**	➡ Symmetry in shapes ➡ Figures to make a quarter turn, a half turn, a three quarter and a full turn Rotational symmetry and mirror image	**Experiential learning** To make a toy wind mill and give it a quarter turn, half turn and full turn REVISION STATION:1 Page no: 138 WORKSHEET :1 Page no: 139 **CLASS TEST -2** PROJECT: Stick picture of symmetrical Indian monuments in your scrap book	➡ Complete a symmetric figure given a line of symmetry ➡ Draw figures to make a quarter at turn, a half turn, a three quarter turn .	➡ Intellectual development ➡ Observation of different symmetric patterns in nature	4
	REVISION FOR PT1					3

JULY 19/19	**3. DATA HANDLING** **Cross curricular connect** Subject integration- EVS : chapter 5 Blow hot Blow cold, family and relationship	➡ Interpretation from the bar graph ➡ Construct pie chart ➡ Line graph	Experiential learning : Collect data of the heights of the friends and draw table With the help of the table draw a line graph REVISION STATION:1 **CLASS TEST -3**	➡ Able to interpret data from a pie chart ➡ Construct pie chart for the given data ➡ Represent and interpret data using tally marks ➡ Interpret data from a line graph ➡ Draw line graph for the given data		**4**
Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Practical's/ Technology Integration/ Art Integration/ Experiential Learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
JULY 19/19	**4. OPERATIONS ON LARGE NUMBERS** **Cross curricular connect** **Connected to daily Life- Financial literacy page no 26**	➡ Addition and subtraction of 7 &8 digit numbers ➡ Find the missing digits. ➡ Story sums. ➡ digit numbers ➡ Properties of multiplication ➡ Story sums	Lab Activity 3 : (creativity and innovation) Method of multiplication- Napier's method	➡ Able to perform addition and subtraction of large numbers ➡ Evaluate the product of large numbers ➡ Perform division of large numbers ➡ State the properties of addition , subtraction, multiplication and division ➡ Solve word problems based on the four operations ➡ Calculate the average of the given numbers	Intellectual kindling takes place through Observation Concentration Comparison and Analytical ability Physical Development.	**8**

AUGUST 18/18	**4. OPERATIONS ON LARGE NUMBERS** **Cross curricular connect** **Connected to daily Life- Financial literacy page no 26**	➡ Division of a 5 digit number by a 2 digit number and 3 digit number ➡ Properties of division ➡ Average ➡ Story sums	Lab Activity 4 : (creativity and innovation) DIVISION HOUSE REVISION STATION:1 **CLASS TEST -4** **WORKSHEET -1** REVISON FOR PT2	➡ Able to perform addition and subtraction of large numbers ➡ Evaluate the product of large numbers ➡ Perform division of large numbers ➡ State the properties of addition , subtraction, multiplication and division ➡ Solve word problems based on the four operations ➡ Calculate the average of the given numbers	Intellectual kindling takes place through Observation Concentration Comparison and Analytical ability Physical Development.	**5** **2**
AUGUST 18/18	**5.FACTORS AND MULTIPLES** **Cross curricular connect** **Multiplication tables 1 to 15**	➡ Multiples ➡ Common multiples ➡ Factors ➡ Divisibility rules ➡ Common factors ➡ Prime and composite numbers ➡ Prime factorisation .HCF, LCM ➡ HCF using prime factorization method and short division method ➡ Finding LCM using prime factorization method . ➡	**Lab Activity :5 (Experiential learning)** Finding HCF using two different colored chart papers Crossword puzzle:1 Page no 56 PROJECT: Page number 56 REVISION STATION:1 **CLASS TEST -5** **WORKSHEET -1**	➡ Acquire the knowledge of Multiples ➡ Common multiples Factors ➡ Common factors ➡ Prime and composite numbers. ➡ Learns the method of ➡ Prime factorization. ➡ Factorization using division method. ➡ HCF, LCM. ➡ Finding LCM using multiples. ➡ LCM using division method	Intellectual development Observation Concentration Comparison and analytical ability	**11**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Practical's/ Technology Integration/ Art Integration/ Experiential Learning	Learning outcomes	Integrated values	No. of periods for each chapter
SEPTEMBER 17/17	**6. PERIMETER AND AREA** Cross – curricular connect **About the area of single match and the area of the double match**	➡ Perimeter ➡ Perimeter of rectangle ➡ Perimeter of square ➡ Area of irregular shapes	Experiential learning To find area and perimeter of rectangles, squares and triangles Lab Activity 6: Perimeter of a rectangle and square using square grid paper Lab Activity 7 : Area of a closed irregular figure using square grid paper REVISION STATION:1 **WORKSHEET -1** **CLASS TEST -6**	➡ To find the perimeter of square and rectangle ➡ Calculate the area of square and rectangle ➡ Evaluate the area of triangles ➡ Estimate the approximate area of irregular shapes	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	**7**
	TERM I EXAMINATION REVISION					**10**
OCTOBER 19/19	TERM I EXAMINATION					**8**

Month /No. working days / No. of periods	Unit / Chapter/Sub theme	Key concepts	Activities /Practical's/ Technology Integration/ Art Integration/	Learning outcomes	Integrated values	No. of periods for each

			Experiential Learning			**chapter**
OCTOBER 19/19	**7. BASIC GEOMETRY** **Cross curricular connection** **Social and cross cultural interaction** **Page number 117**	➡ Point, line , line segment and ray ➡ Concept of Angle ➡ Types of angles ➡ Measuring angles ➡ Construct of an angle using protractor ➡ Types of angles ➡ Types of parallel lines and perpendicular lines	**Experential learning** **To reiterate the concept of different angles** **Art integration** To construct angles using a circular sheet of paper , crayons /colour pencils REVISION STATION:1 **WORKSHEET -1** **CLASS TEST -8**	➡ Acquire the knowledge on point, line, line segment and ray ➡ Able to describe the concept of angle ➡ Develops the skill of drawing and measuring angles using protractor	➡ Intellectual development ➡ Observation ➡ Concentration Comparison ➡ Discrimination ➡ Analytical ability ➡ Intellectual development ➡ Observation ➡ Concentration Comparison ➡ Discrimination ➡ Analytical ability	**11**
Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Practical's/ Technology Integration/ Art Integration/ Experiential Learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**
NOVEMBER 22/22	**8. FRACTIONS**	➡ Equivalent fractions ➡ Comparison of fractions ➡ Ascending and descending order of fractions ➡ Like fractions and unlike fractions	Technology literary And Experiential learning Presentation on the computer /grid to describe the proper, improper fraction , like fractions, unlike fraction and mixed fraction	➡ Able to find the equivalent fractions ➡ Able to Compare like and unlike fractions	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	15

	FRACTIONS **Cross curricular connect** **Area of different states in india and the total area of India** Page no 82	➡ Sum of like and unlike fractions ➡ Subtraction of like and unlike fractions ➡ Product of a fraction by a whole number ➡ Product of fraction by another fraction and by mixed fraction ➡ Multiplicative inverse Quotient	Lab Activity :8 Multiplication of fractions using strips or beads PROJECT: Find the area covered by water to the total area of land in India . REVISION STATION:1 **CLASS TEST -8**	➡ Calculate the sum of like , unlike and mixed fractions ➡ Perform subtraction of like of like , unlike and mixed fractions ➡ Evaluate the product of a fraction by a whole number ➡ Evaluate the product of a fraction by another fraction and by mixed fractions ➡ Find the multiplication inverse of a number ➡ Calculate the quotient when a fraction is divided by a whole number and by an another fraction	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	
NOVEMBER 22/22	**9.DECIMALS (EXCLUDING DIVISION OF DECIMALS)** Cross curricular Financial literacy Page no 89	➡ Introduction to decimals. ➡ -Expanded form of decimals. ➡ -Decimal numbers on the place value chart. ➡ -Decimals as fractions ➡ -Conversion of fractions into decimals and vice versa.	**Experential learning** Arrange a bank statement and find out the meaning of all the key terms in it.	➡ Understands Decimals. ➡ Able to write expanded form of decimals. ➡ Draw Pictorial representation of decimals ➡ Convert fractions into decimals and vice versa	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	**7**

DECEMBER 16/16 **PROJECT: Collection of Projects Term 2**	**DECIMALS (EXCLUDING DIVISION OF DECIMALS)**	➡ Like and unlike decimals ➡ -Comparing decimals ➡ -Ascending and descending order of decimals ➡ -Addition and subtraction of decimals - Multiplication of decimals	**Experential learning and art integration** Find the sum, difference and product of decimal numbers using grid sheet and colour pencil REVISION STATION:1 **WORKSHEET -1** **CLASS TEST -9**	➡ Define like and unlike decimals ➡ Compare and order decimals ➡ Perform addition, subtraction, multiplication and division on decimals	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	**6**
DECEMBER 16/16	**10.TIME AND TEMPERATURE**	➡ Converting hours into minutes ➡ Converting minutes into seconds ➡ Converting hours into days ➡ Converting minutes into hours ➡ Duration of time ➡ Calculating the number of days ➡ Conversion of Fahrenheit into Celsius ➡ Conversion of Celsius into Fahrenheit	**Experiential learning** To find the temperature of warm and cold wate**r** REVISION STATION:1 **WORKSHEET -1** **CLASS TEST -10**	➡Acquire the knowledge of conversion of hours , minutes seconds and day vice versa ➡Find the time duration of the event late the number of and days ➡Define temperature ➡Convert temperature of Fahrenheit into Celsius	➡ Intellectual development ➡ Observation and classification of angles based on its measure	**10**
JANUARY 22/22			**REVISION FOR PT 3**			**3**

JANUARY 22/22	**11.METRIC MEASURES**	➡ Conversion of units of measurement ➡ Addition and subtraction ➡ Multiplication and division ➡ Estimation of measurement	**Experiential learning** Real life examples of measurement PROJECT Make a list of the estimated weight of objects that you use everyday REVISION STATION:1 **CLASS TEST -11**	➡ To convert bigger units of measurement into smaller units and vice versa ➡ Perform arithmetic operation on units of length, weight and capacity ➡ Solve word problems on length, weight and capacity ➡ Estimate measurement	Intellectual development Observation and classification of angles based on its measure	**10**
JANUARY 22/22	**12. VOLUME AND NETS**	➡ Introduction to volume ➡ Volume of solid shapes with unit cubes ➡ Volume of a cuboid & cube ➡ Nets of 3d shapes	**Experiential learning** **To find the volume of different solid using small unit cubes** **Art integration** **To draw the different views of 3d cubes** PROJECT **Find the volume of items immersed in water** **CLASS TEST -12**	➡ To calculate the volume of cubes and cuboid ➡ To find the volume of solid figures and made with unit cubes	Intellectual development Observation and classification of angles based on its measure	**6**
Month /No. working days / No. of periods	**Unit / Chapter/Sub theme**	**Key concepts**	**Activities /Practical's/ Technology Integration/ Art Integration/ Experiential Learning**	**Learning outcomes**	**Integrated values**	**No. of periods for each chapter**

JANUARY 22/22	**13. MAPPING SKILLS**	**Magnification** **Route maps** **Direction**	**Creativity and innovation** **Share the location** **Project : Draw a route map** **WORKSHEET -1** REVISION STATION:1	To draw the reduced and magnified images of actual objects. To classify the directions-north, south, east and west. To draw route maps & study maps using keys.	Intellectual development Observation Concentration Comparison Discrimination Analytical ability	**3**
FEBRUARY 21/21	**14. LIFE MATHEMATICS** **Cross curricular subject** **Financial literacy** **About debit card and credit card**	**Profit and loss** **Cost price** **Selling price** **Unitary method**	**Experiential learning** **Mock market** PROJECT **Find the cost price of different items (unitary method)** REVISION STATION:1 **CLASS TEST -14** REVISION FOR TERM 2 EXAM	To define the terms profit, loss, cost price and selling price. To calculate profit and loss. To find the selling price and the cost price. To apply unitary method in everyday calculations.	Intellectual development Observation and classification of angles based on its measure	**7** **14**
MARCH 23/23	TERM II EXAMINATION					

CURRICULUM PLANNING 2023-24 (PALLAVUR/TATTAMANGALAM/KOLLENGODE)

CLASS : VI SUBJECT :MATHEMATICS RESOURCE MATERIAL/TEXT : NCERT

NO. OF CHAPTERS : 14

Month /no. Of working days / no, of periods	Unit /chapter/ subtheme	Keyconcepts	Lab activities /practicals/ technology integration/Art integration/sports integration/Experiential learning/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
June:23 Days / 23 periods **CVP PROJECT Innovative methods to solve and create puzzles using basic shapes**	1 Knowing Our Numbers Social science(History) Chapter 1 – What, Where, How and When 2. Whole Numbers Social (Geography) Chapter Name: The Earth in the Solar system)	➡ Large numbers ➡ Indian System ➡ International System ➡ Place Value & ➡ Expanded Form ➡ Estimation ➡ Roman Numerals ➡ Properties Of Whole Numbers ➡ Number Line Representation ➡ Word Problem	LAB ACTIVITY ➡ Hands On Activity -Estimation ➡ Place Value Chart -Indian & International system EL : Place value of a digit- Role play . **Worksheet** **Class test 1** LAB ACTIVITY Flash cards to state the properties of whole numbers. AI: Representation of whole numbers on a number line through creative Art. EL: Grid paper cutting to learn properties of whole numbers TI – Video or PPT presentation based on the concept. **Worksheet** **Class test 2**	➡ Recognizes Number Name according to Indian And International number System ➡ Estimates sum , difference and product ➡ Understands the Properties Of Whole Numbers	Integrated Development - comparison Classification Apply in daily life Integrated development –analytical ability	**12** **11**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities/ practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
July: **22 Days/22 periods**	**REVISION FOR PT 1 EXAMINATION**					**3**
	3 Playing With Numbers **PERIODIC TEST –1 (July 10- 17)**	➡ Prime and Composite Numbers ➡ Divisibility Tests ➡ Common Multiples and Factors ➡ LCM & HCF ➡ Word Problems	LAB ACTIVITY ➡ *HCF using strips – A I – Artistic factor tree EL -Sieve of Eratosthenes- to find prime numbers S I – Games related to Warm up Activity. **Worksheet** **Class test 3**	➡ *Understands how to find HCF and LCM ➡ Acquires the knowledge of divisibility test in different numbers ➡ Differentiates prime and composite numbers ➡ *Applies HCF and LCM in particular situations	Integrated Development- Observation , Comparison, Classification, Analytical ability	**11**
	4 Basic Geometrical Ideas Social science(Geography) Chapter 3 – Motions of Earth	➡ Concept of line, ➡ line segment, ray, parallel and intersecting lines ➡ Drawing a circle and marking the parts of it ➡ Quadrilaterals	LAB ACTIVITY Geometry box to construct a circle, Quadrilateral A I -Circular patterns EL -Geometric designs using different types of lines. **Worksheet** **Class test 4**	➡ Learns and understands basic geometrical ideas ➡ Identifies the different parts of a circle ➡ *Understands ➡ Quadrilaterals	Observation , Comparison, Classification Application in daily life	**6**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
	5 Symmetry Science – chapter 11 Light , shadow, and reflections	*To identify lines of symmetry in shapes *to identify lines of symmetry in nature	LAB ACTIVITY Mirror halves of different figures /letters –to show line of symmetry A I – thread pattern EL - visit to school garden. **Worksheet** **Class test 5**	Learns symmetry and line of symmetry reflectionsymmetry Able to discover the symmetrical forms and acquires the sense of aesthetics	Integrated Development concentration Classification , . independent thinking	**2**
August:20/ 20 periods	6. Data Handling EVS Chapter 3 (class – 5) – From gathering to growing food	**B**ar graph Pictograph Interpretation of graphs	LAB ACTIVITY Draw bar graph based on unit test marks A I: Making the graph of the survey using colored papers, sketches. Pictograph of the data using stickers EL: Survey of TV advertisement. S I : Bar graph representation of the favourite sport. **Worksheet** **Class test 6**	Analyses, interprets and represents numerical data using statistics Able to represent numerical data graphically as pictographs Able to draw bar graphs to represent numerical data. Arranges given or collected informations such as expenditure on different items in a family in the last 6 months in the form of a table, pictograph, and bar graph and interpret them.	Integrated Development concentration Classification , comparison . independent thinking skill in drawing	**6**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
	REVISION FOR PT 2 EXAMINATION					**4**
	7.Integers Class 5 Chapter-12 Temperature **PERIODIC TEST 2 (Aug16th - 23rd)**	➡ concept of positive& negative numbers ➡ Representation of Integers on a number line ➡ Addition and subtraction of integers	LAB ACTIVITY integer slabs- addition and subtraction A I: Integer rhymes. EL: Use of integers in thermometer, water level in dams. S I : Use of integers while playing games to calculate the score. **Worksheet** **Class test 7**	➡ Recognizes- need for integers ➡ ordering of integers ➡ Comparing of integers ➡ Add and subtract integers ➡ Applies in mathematical operations ➡ Solves problems involving integers	Intellectual development Observation Concentration, imagination **M**ental development- aesthetic sense development. Integrated Development Classification , comparison , Use of integers in daily life	**10**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
SEPTEMBER (19 DAYS/19 PERIODS)	8. Fractions	➡ Types of fractions ➡ mixed fraction conversion ➡ Addition & Subtraction ➡ Comparing fractions ➡ Equivalent fractions	LAB ACTIVITY Addition and subtraction of fractions using fraction strips. A I: – Fraction art through paper folding. EL : Equivalent Fractions using fractional strips. Worksheet **Class test 8**	➡ Recognizes fraction as a part of a whole ➡ Identifies different kinds of fraction ➡ Comparing fractions ➡ learns to add and subtract fraction	Integrated Development Comparison Classification BMI coordination Independent Thinking Compares gross and subtle Relates the lower to the higher	**15**
	REVISION FOR TERM 1 EXAMINATION					**4**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
	REVISION FOR TERM 1 EXAMINATION					**4**
October:21 days/ 21 days	9. Decimals Science – chapter 10 – Motion and Measurement of distances	Concept of decimal ➡ Tenths and hundred ➡ writing in fraction & decimals	LAB ACTIVITY Decimal representation in decimal abacus A I – Colouring the grid paper.	➡ Understands place value chart ➡ Identifies different types of decimal fractions	Integrated Development Comparison Classification Speed & accuracy	**5**

	TERM 1 EXAMINATION **(Oct 5th – 19th)**					**12**
Month/no. Of Working Days /No, of Periods	**Unit /chapter/sub theme**	**Key concepts**	**Lab activities /practicals/ technology integration/evaluation**	**Learning outcomes**	**Integrated values**	**No. Of periods for each chapter**
November: 25/25 Periods	Decimals (Continuation)	➡ Addition and subtraction of decimals	E L – Representation of decimals through paper folding. **Worksheet** **Class test 9**	➡ Acquires the knowledge of converting decimal fractions to fractions and vice versa.	Integrated Development Observation Comparison Classification	**7**

	10. Understanding elementary shapes Social science(Geography) Chapter 2 – Latitudes and Longitudes	➡ perpendicular lines, ➡ Comparing lines ➡ Polygon ➡ 3D shapes ➡ Types of triangle & Quadrilaterals	LAB ACTIVITY 1.2D and 3D shapes 2.perpendicular lines 3,angle from real life situation A I – Quadrilateral robots. E L -Revolution using clock face. **Worksheet** **Class test 10**	➡ Able to compare and measure line segments ➡ Able to measure an angle and recognizes the type of angles. ➡ To identify the different kinds of triangles and quadrilaterals.	Integrated Development Observation Comparison Classification	**11**
	Ratio &Proportion (upto page number 252)	➡ Concept of ratio	LAB ACTIVITY Finding the ratio of the length and breadth of your room A I – coloring the kolams and pookalam design according to the given ratio. E L – cooking recipes	➡ Able to state what ratio is and express it in its lowest form. ➡ Able to expresses ratio as a proper or improper fraction.	Integrated Development Observation Comparison Classification	**7**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Activities /practicals/ technology integration	Learning outcomes	Integrated values	No. Of periods for each chapter
December:19/19 Periods	11. Ratio and proportion (continuation) (page no: 252 – 259) Social science (Geography) Chapter 8 – India climate and vegetation 12. Algebra Science Chapter 10 – Motion and Measurement of distances	*Concept of Proportion *word problem Proportion To write an expression using variables and constant	**Worksheet** **Class test 11** LAB ACTIVITY *match stick patterns to understand variables – lab activity A.I – Algebraic puzzles. E.L – Forming the formula using algebraic expressions *Frame statements using letters and numbers from real life situations **Worksheet** **Class test 12**	Able to define and recapitulating proportion. Able to solve problems by unitary method and direct variation Recognizes the concept of algebra using variables *Able to identify constants and variables. Able to perform basic four operations *Applies to real life Discovers relationships and symmetry	Integrated Development-Comparing quantities-provide reasoning and ,Learning the art of sharing and caring. Integrated Development Concentration Comparison	**5** **14**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
	REVISION FOR PT 3					**4**
January: **24/24 periods** **CVP PROJECT** **Finding perimeter and area** **(class room ,foot ball court,corridor ,study room etc)**	13. Mensuration Science Chapter 14 – Water **PERIODIC TEST 3** **(Jan 8th – 17th)** 14. Practical geometry (Up to page no:279)	*To find the area *To find the perimeter Finding solution ➡ To construct: ➡ perpendicular bisectors ➡ circles	LAB ACTIVITY To find the area the perimeter of different objects A.I – Drawing figures on a Grid paper and finding its area and perimeter. E.L – To Find the Area and perimeter of their classroom S .I. – comparison of 2 D shapes with the structure of ground in Sport. **Worksheet** **Class test 13** LAB ACTIVITY Constructions and related exercises (Digital Board) A.I - Circular patterns through art.	➡ Learns and understands the perimeter of a figure ➡ Learns and understands the area of a plane figure ➡ *Able to calculate the perimeter and area of regular ➡ Able to draw line segments ➡ Able to draw angles using a protractor and compasses	Integrated Development- practical utility Skill of computation Integrated Development - B M I Coordination, observation aesthetic sense skill of drawing	**13** **7**

Month/no. Of Working Days /No, of Periods	Unit /chapter/sub theme	Key concepts	Lab activities /practicals/ technology integration/evaluation	Learning outcomes	Integrated values	No. Of periods for each chapter
February/23 /23 periods	Practical geometry (continued) (Page no: 279 – 291)	➡ Line segments ➡ angles ➡ angle bisector **Worksheet** **Class test 14**	E.L – Representation of angles using physical movements	Applies in real life situations	Integrated Development - B M I Coordination.	**7**
	REVISION FOR ANNUAL EXAMINATION					**16**
March	**Annual Examination**					**25**

CURRICULAM PLANNING 2023- 2024 (Pallavur/ Tattamangalam/ Kollengode)

Class:VII Subject: Mathematics Resource material/Text: NCERT. No. of chapter: 15

Month/ No.Of.Working days / No.of.Periods	Unit/ Chapter/ SubTheme	Key concepts	Lab Activities/ Technology Integrated/ EL / AI/CVP PROJECT	Learning outcomes	Integrated Value	No. of periods per chapter
JUNE/ 23 days/ 23periods	Integers (physics chapter 13 motion and time)	*Basic operations *Properties of integers *Multiplication of two integers *Division of two Integers *Representation of Integers on a number line Application of integers	***LAB ACTIVITY:** **Operation using integers (slabs)** *** Art Integration** **Integer Rhyme** **Integer number line** ***EL** **Measuring temperature using thermometer.** **CVP PROJECT –INTEGER CHASE.** ***Worksheet** ***Class test – 1**	➡ Understands the properties of integers ➡ Learns and understands the basic operations on Integers ➡ Able to apply integers appropriately in solving word problems ➡ Multiplies or divides two integers	Integrated Development -Intellectual Development Independent thinking Analytical ability Observation Classification Skill in drawing and computation .	10

	Data handling (physics chapter 13 motion and time)	*Collection and organisation of data *Interpreting data from the graph *Mean,median and mode *Constructing bar graphs *concept of probability	***Lab Activity/ EL** **Probability (using probability tokens)** *** Art Integration** **Double bar graph – eg. Compare the temperature of different cities/ Survey** ***Worksheet** ***Class test - 2**	➡ *Gets ability to compare numerical facts in visual form. ➡ *Understandstabulating and counting ➡ *Understands the calculation of Mean,Median&Mode ➡ *Able to interpret data from the graph given ➡ *learns to represent data on a bar graph &doublebargraph ➡ *Applies the concept of Probability in real life situations	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill in drawing and computation	6
	Fractions and Decimals (Till Ex-2.1)	Fraction – basic operations. Addition and subtraction	*** Art Integration: Creation fraction art (fish, bird, etc)** **Decimal Place value chart (grid)**	➡ Understands addition and subtraction of fractions	Integrated Development -Intellectual Development Independent thinking Analytical ability Observation Classification	7

Month/ No.Of.Working days / No.of.Periods	Unit/ Chapter/ SubTheme	Key concepts	Lab Activities/ Technology Integrated/ EL / AI	Learning outcomes	Integrated Value	No. of periods per chapter
JULY/22days/ 22periods	Fractions and Decimals (Contn)	Multiplication and division Different types of fractions *Decimals – basic operations. Addition and subtraction Multiplication and division *Multiplication of decimals by 10,100,1000 *Applications of fractions and decimals	***Lab Activity: Represent equivalent fractions using fraction strips** ***EL Mock market using decimal numbers** ***Worksheet** ***Class test - 3**	➡ Understands multiplication and division of decimals. ➡ learns and understands multiplication of decimals by 10,100 and 1000 ➡ Use algorithms to multiply and divide fractions and decimals	Integrated Development -Intellectual Development Independent thinking Analytical ability Observation Classification	7
	REVISION FOR PT 1					3
	Simple Equations (physics chapter 4 Heat)	*Setting an equation *Solving an equation *From Solutions to Equations *Application of Simple Equations to practical situations	*** Art Integration/ EL: Creating Riddles/story sums on simple equations** ***Worksheet** ***Class test - 4**	➡ Understands what an Equation is. ➡ Learns and understands to solve an equation ➡ Able to apply simple equations to practical situations ➡ Represents daily life situations in the form of a simple equation and solves it.	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill in computation	9

	Lines and angles (till Ex-5.1 – pg.no:103)	Practical situation *Pair of angles 1.linear 2.adjacent , 3.Vertically opposite angles 4.Supplementary Complementary angles . Pairs of lines	***EL** **Types of angles (paper folding)** *** Art Integration** **Chart work based on angles around us**	➡ Able to identify complementary ,supplementary angles	Integrated Development Intellectual Development Independent thinking Analytical ability Observation Classification	3
Month/ No.Of.Working days / No.of.Periods	**Unit/ Chapter/ SubTheme**	**Key concepts**	**Lab Activities/ Technology Integrated/ EL / AI**	**Learning outcomes**	**Integrated Value**	**No. of periods per chapter**
August/ 20days/ 20 periods	Lines and angles continued (physics chapter 15 light,yoga)	*Angles made by a transversal Checking for parallel lines	*** Lab Activity** **Angles made by a transversal** ***Worksheet** ***Class test - 5**	➡ Able to identify vertically opposite ,adjacent and linear angles ➡ *Acquires knowledge of all the Pair of angles, ➡ *Learns and understands the angles made by a transversal and condition for parallel lines	Integrated Development Intellectual Development Independent thinking Analytical ability Observation Classification Skill in drawing and computation	4
	REVISION FOR PT 2					**3**
	The triangle and its properties	*Medians of a triangle *Altitudes of a triangle *Special types of triangles *Angle sum property *Exterior angle property *Pythagoras theorem *Sum of two sides of a	**EL/ Lab activity** *** Median of a triangle (paper folding)** ***Angle sum property** ***Exterior angle property**	➡ Learns and understands ➡ Medians of a triangle ➡ Altitudes of a triangle ➡ Special types of triangle ➡ Acquires knowledge of angle sum property ➡ Exterior angle property	Integrated Development Intellectual Development and Independent thinking Analytical ability	7

		triangle is greater than the third side (inequality property)	*** Art Integration** **Rangoli Designs using triangles** **PPT based on the application of triangles.** ***Worksheet** ***Class test - 6**	➡ Learns and understands Pythagoras theorem ➡ Acquires knowledge of sum of two sides is greater than the third side	Observation Classification Skill in computation Skill in drawing	
	Symmetry (physics chapter 15 light)	*Lines of symmetry for regular polygons *Line symmetry *Reflectional symmetry *Rotational symmetry	*** Art integration** **Prepare a PPT on symmetrical figures/ objects around us.** ***EL** **Ink blot patterns/ floral patterns**	*Learns and understands 1.Lines of symmetry for regular polygons 2.Line symmetry *Understands the difference between reflectional and rotational symmetry	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill in computation Skill in drawing	3
	Congruence of triangles	Congruence of plane figures *Congruence through superposition	**Lab activity:** **SSS, SAS ,ASA , RHS –** **Trace copy method-lab activity.** **Super position method using models of triangles**	➡ Learns and understands congruence of plane figures through superposition ➡ Learns and understands the congruence of triangles through geometrical and theoretical proofs	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill of computation Skill in drawing	3

Month/ No.Of.Working days / No.of.Periods	**Unit/ Chapter/ SubTheme**	**Key concepts**	**Lab Activities/ Technology Integrated/ EL / AI**	**Learning outcomes**	**Integrated Value**	**No. of periods per chapter**
September/ 19days/ 19 periods	Congruence of triangles (Continued)	*Congruence of triangles *Criteria Congruence of triangles – SSS(SideSideSide) SAS(Side Angle Side) ASA(Angle Side Angle) RHS (Right Angle Hypotenuse side)	**Lab activity:** **SSS, SAS ,ASA , RHS – Trace copy method-lab activity.** **Super position method using models of triangles** **Art Integration:** **Craft work/ Drawing using congruent triangles**. **EL :** **Project work based on application of congruent triangles** ***Worksheet** ***Class test - 7**	➡ Learns and understands congruence of plane figures through superposition ➡ Learns and understands the congruence of triangles through geometrical and theoretical proofs	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill of computation Skill in drawing	14
	REVISION FOR TERM 1					**5**

Month/ No.Of.Working days / No.of.Periods	Unit/ Chapter/ SubTheme	Key concepts	Lab Activities/ Technology Integrated/ EL / AI	Learning outcomes	Integrated Value	No. of periods per chapter
	REVISION FOR TERM 1					**2**
	TERM 1 EXAMINATION					**12**
October: 21 days /21periods	Practical Geometry (physics chapter 15 light)	Construction of a line parallel to a given line, through a point not on the line Construction of triangles when - Its 3 sides are given. (SSS Criterion) Construction of triangles when - the two sides and the measure of the angle between them are known. (SAS Criterion) - the measures of two of its angles and the length of the side included between them is given. (ASA Criterion) - the length of one leg and its hypotenuse are given. (RHS criterion)	**Lab activity- Construction using geometry box** **Art Integration/ EL: Mathematical Garden** ***Worksheet** ***Class test – 8**	➡ Understands the different steps in constructing a Learns and understands the construction of a line parallel to a given line, through a point not on the line ➡ Understands the different steps in constructing a triangle using the following criterion ➡ SSS Criterion ➡ SAS Criterion ➡ triangle using the following criterion ➡ ASA Criterion ➡ RHS Criterion Understands the different steps in constructing a triangle using the following criterion ➡ RHS Criterion	Intellectual Development Independent thinking Analytical ability Observation Classification Skill in drawing	7

Month/ No.Of.Working days / No.of.Periods	Unit/ Chapter/ SubTheme	Key concepts	Lab Activities/ Technology Integrated/ EL / AI/CVP PROJECT	Learning outcomes	Integrated Value	No. of periods per chapter
November: 25 days/25 periods	Rational numbers (physics chapter 13 motion and time chapter 4 heat)	Introduction *Definition *Representation of Rational numbers on a number line *Rational numbers in Standard form *Comparison of Rational numbers *Rational numbers between two rational numbers *Basic operations *Applications of rational numbers	**Lab activity:** ***Representation of rational numbers on number line** ***Worksheet** ***Class test - 9**	➡ Knows the extension of number system and the need for rational numbers ➡ Learns and understands the representation of rational numbers on the number line, comparison of rational numbers and their basic operations ➡ Able to apply rational numbers to practical situations	Integrated Development Intellectual Development and Independent thinking Observation Analytical ability Comparison Classification Skill in drawing and computation	12
	Comparing quantities	*Equivalent ratios *Unitary method, Percentage Converting Fractions, decimals, ratios to % , *Converting percentages to fractions and decimals *Uses of percentages *Profit ,loss *Simple interest	**Lab Activity: Create a shop in the lab to learn profit/ loss percentage, increase/decrease percentage** **CVP PROJECT –RATIO AND PROPORTION IN DAILY LIFE** **Art Integration/EL: Mock banking** ***Worksheet** ***Class test - 10**	➡ Learns and understands ratios decimals and percentages ➡ Learns and understands Profit , loss , simple interest its formula and how it is used in day to day life ➡ Able to apply percentages to practical situations ➡ Solves problems related to conversions of percentage to fractions and decimals and vice- versa ➡ Learns and understands simple interest its formula and how it is used in day to day life	Independent thinking Observation Analytical ability Comparison Classification Skill in drawing and computation Independent thinking Observation Analytical ability Comparison Classification	**13**

Month/ No.Of.Working days / No.of.Periods	Unit/ Chapter/ SubTheme	Key concepts	Lab Activities/ Technology Integrated/ EL / AI	Learning outcomes	Integrated Value	No. of periods per chapter
December : 19 days/19 periods	Perimeter and area Algebraic expressions	*Area and perimeter of square, rectangle triangle and parallelogram, Area and perimeter of square, rectangle triangle and parallelogram Introduction *Terms and coefficients of an expression *Like and Unlike terms *Monomials, Binomials, Trinomials and Polynomials	**Lab Activity:** **Finding area and perimeter of parallelogram and triangles using lab kits** **Worksheet** ***Class test - 11** **Lab activity- Use of algebraic expressions in forming formulae and rules**	➡ Learns and understands to find the area and perimeter using formula ➡ Applications to find the area and perimeter using formula ➡ Able to understand how expressions are formed ➡ Learns about terms, expressions, like and unlike terms ➡ Able to identify monomials, binomials, trinomials and polynomials	Integrated Development Intellectual Development and Independent thinking Analytical ability Observation Classification Skill of computation Intellectual Development Independent thinking	**12** **7**
	REVISION FOR PT 3					**3**

January/ 24days/ 24periods	Algebraic expressions (Contn) (physics chapter 13 motion and time)	*Addition and subtraction of polynomials *Finding the value of an expression *Using algebraic expressions – Formulae and Rules	**Art Integration** ***Number patterns** ***Match sticks patterns** ***Worksheet** ***Class test - 12**	➡ Able to add and subtract polynomials ➡ Acquires knowledge to find the value of an expression ➡ Applies appropriate formulae and rules in problems	Analytical ability Observation Classification Skill of computation	**12**
	Exponents and powers (Class 5 EVS Chapter18 Properties of water)	Exponents (only natural numbers) Laws of exponents	**Lab activity:** **Exponents using paper folding.** **Art Integration:** **PPT on application of exponents in daily life** ***Worksheet** ***Class test - 13**	➡ Understands what Exponent is. ➡ Learns and understands how to apply laws of exponents.	Intellectual Development Independent thinking Analytical ability Observation Classification Skill of Computation Concentration	**9**
February/ 23 days/ 23 periods	Exponents and powers (Continued) (Class 5 EVS Chapter18 Properties of water)	Exponents (only natural numbers) Laws of exponents	**Lab activity:** **Exponents using paper folding.** **Art Integration:** **PPT on application of exponents in daily life** ***Worksheet** ***Class test - 13**	➡ Understands what Exponent is. ➡ Learns and understands how to apply laws of exponents.	Intellectual Development Independent thinking Analytical ability Observation Classification Skill of Computation Concentration	**4**

	Visualising solid shapes (seminar) Class 5 EVS Chapter14 Shelter for every one)	Introduction to plane figures and solid shapes *3D shapes ,Faces – Edges-Vertices *Nets for building 3D shapes *Drawing solid on a flat surface 1.Oblique sketches 2.Isometric sketches *Visualising solid objects *Viewing different sections of a solid	**Lab Activity/ Art Integration:** ***Nets for building 3D shapes**	➡ Able to identify plane figures and solid shapes ➡ Learns and understands faces, edges and vertices of a solid ➡ Able to draw nets for 3Dshapes ➡ Able to draw solids on a flat surface ➡ Able to view and identify different sections of a solid	Intellectual Development Independent thinking Analytical ability Observation Classification Skill of drawing Concentration	**8**
	REVISION FOR TERM 2					9
MARCH	**REVISION FOR TERM2** **TERM II EXAMINATION**					

CURRICULUM PLANNING 2023-2024 (PALLAVUR/TATTAMANGALAM/KOLLENGODE)

Class:VIII Subject: Mathematics Resource material/Text: NCERT. No. of chapter: 16

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	LabActivities/ Practicals/ Technology integration/Experiential Learning /AI/CVP PROJECT	Learning Outcomes	Integrated Values	No of periods for each chapter
JUNE 23days/ 23 periods	Rational numbers (physics chapter 11-force and pressure-class 8)	Introduction Properties of rational numbers Representation of rational numbers on a number line Rational numbers between two rational numbers.	**LAB ACTIVITY/EL** Representation of rational numbers on a number line AI: PPT on "Properties of rational numbers **Work sheet** **Class Test -1**	➡ Acquires knowledge about Rational numbers ➡ Learns and understands the properties of rational numbers ➡ Learns how to represent a rational number on a number line ➡ &to find rational numbers between two rational numbers	Intellectual Development Analytical ability Observation Classification Skill of computation Skill of drawing	**10**
	Understanding Quadrilaterals	Properties of quadrilaterals(angle sum property) some special parallelograms and their properties	**LAB ACTIVITY:** Family of Quadrilaterals using Lab Kits EL: Angle sum property of a quadrilateral and Exterior angle property of polygons AI: Video on application of Quadrilaterals in daily life **CVP PROJECT – APPLICATIONS OF QUADRILATERALS** **Work sheet** **Class Test – 2**	➡ Generalises sum of angles of a quadrilateral ➡ Understands different kinds of quadrilaterals-some special quadrilaterals. ➡ Acquire the knowledge of properties of some special parallelograms ➡ Solve problems related to angles of a Quadrilaterals using angle sum properties ➡ Verifies properties of parallelograms and establishes relationship between them through reasoning.	Intellectual Development Independent thinking Observation Classification Comparison Skill of drawing	**10**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Experiential learning / AI	Learning Outcomes	Integrated Values	No of periods for each chapter
JUNE 23days/ 23 periods	Practical Geometry (Ex-4.1)	Construction of quadrilaterals 1.When the length of 4sides and a diagonal are given	LAB ACTIVITY/EI Construction of quadrilaterals using lab kits	➡ Learns and understands the construction of quadrilaterals with the given condition	Intellectual Development Independent thinking Observation Classification Skill of drawing	3
JULY 22days/ 22 Periods	Practical Geometry (continued) (physics chapter 16-LIGHT)	Construction of quadrilaterals 2.when two diagonals and 3 sides are given 3.when two adjacent sides and 3 angles are given 4.when three sides and two included angles are given Some special cases.	REVISION FOR PT1 AI: Construction of Geometrical patterns **Work sheet** **Class Test - 3**	➡ Acquires knowledge how to construct quadrilateral of special cases	Integrated development Concentration, Independent thinking Analytical ability Skill of computation	3 6

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Experiential learning/ AI	Learning Outcomes	Integrated Values	No of periods for each chapter
JULY **22days/ 22 Periods**	Squares and Square Roots	Properties of Square Numbers *Finding the Square of a Number *Pythagorean Triplets *Finding square root using 1.Prime factorisation 2. Long Division Method *Square root of decimals(repeated decimals) *Estimating square root	***Lab Activity – Magic Square** *** EL :** **Finding Squares Using Vedic Maths Tricks** **Square of numbers from 1 to 100** **Work sheet** **Class Test** – 4	➡ Learns and understands the properties of square number. ➡ Acquires the knowledge to find the square of a number and how to apply it in solving problems ➡ Learns and understands how to find the square root using different methods ➡ Acquires the knowledge to find the square root of decimals ➡ Understands how-to the estimate the square root.	Integrated development Concentration, Independent thinking Analytical ability Skill of computation	9
	Cube and Cube Roots	Cubes Cube root through prime factorisation method	***EL: Finding Cubes Using Vedic Maths Tricks** *AI:Project: Create a PPT on Ramanujan and Hardy number/life history of Ramanujan.	➡ Learns and understands how to find the cube of a number ➡ Acquires the knowledge to find the cube root of a number	Intellectual development. observation comparison classification problem solving ability	4

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
AUGUST 20 days/20 periods	Cube and Cube Roots (Continued)	Cube root through prime factorisation method(Continued)	**EL: Finding Cubes Using Vedic Maths Tricks** *AI: Project: Create a PPT on Ramanujan and Hardy number/life history of Ramanujan. **Work sheet** **Class Test -5**	➡ Acquires the knowledge to find the cube root of a number	Intellectual development. observation comparison classification problem solving ability	5
	Visualising Solid Shapes (SEMINAR) (Evs – Chapter14- Shelter for everyone class 5)	Three dimensional shapes *Different views of solid shapes *Euler's formula	LAB ACTIVITY Verification of Eulers Formula using Solid Shapes AI: PPT on Visualising solid shapes	➡ Understands three dimensional shapes ➡ Acquires knowledge about different views of solid shapes ➡ Learns and understands Eulers formula and how to apply it in problems	Intellectual development Classification Observation Skill of computation Comparison	4

			REVISION FOR PT 2			3
	Linear equations (Phy-application prob)	*Introduction *Standard form of L.E in one variable. *Solution of a L.E in one variable * Applications of L.E in one variable	*AI/EL: Group activity To frame 10 problems of L.E related with day to day life and finding the solution **Work sheet** **Class Test - 6**	➧ Understands the standard form of a L.E in one variable ➧ Acquires the knowledge to find the solution of a L.E in one variable ➧ Acquires knowledge to convert word problems to L.E and to solve it	Integrated development Independent thinking Problem solving ability	10

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
SEPTEMBER 19 days/ 19 periods	Data handling (class 7-physics-chapter 13-motion and time) Class 5 EVS Sources of water.	Organising and grouping data * Representation of data 1.Bar graph 2.Histogram Representation of data 3.Piechart *Chance and probability	AI : Forming Frequency distribution tables of their marks and Representing data as histogram. EL/ Lab activity: Probability using playing cards/dice **Work sheet** **Class Test - 7**	➡ Understands how to frame the tally.marks,frequency ➡ Acquires knowledge about the representation of data using different forms and how to apply it in real life situation ➡ Draw and interprets Bar Graphs and Pie Charts ➡ Learns and understands how to apply the probability of an event in day to day life of a Random experiment.	Intellectual development Analytical ability Independent thinking Discrimination power Skill of computation and drawing	7
	Direct and inverse proportion (class 8-physics chapter 11-force and pressure)	Introduction *Direct Proportion	AI: Culinary art (cookery) REVISION FOR TERM 1	➡ Understands the concept of direct and inverse proportion ➡ Applies the knowledge of the same to real life situation	Integrated development – Independent thinking Observation Analytical ability Identification, Problem solving ability Discrimination	7 5

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
OCTOBER **21days/ 21Periods**	Direct and inverse proportion (class 8-physics chapter 11-force and pressure)	Introduction *Direct Proportion(CONTD) *Inverse proportion * Application of direct and inverse proportion *Word problems	REVISION FOR TERM 1 TERM – 1 EXAMINATION AI: Culinary art (cookery) EL – ROLE PLAY CONNECTED TO REAL LIFE EXAMPLES **Work sheet** **Class Test – 8**	➡ Understands the concept of direct and inverse proportion ➡ Applies the knowledge of the same to real life situation. ➡ Recognising the difference between direct and inverse proportion.	Integrated development – Independent thinking Observation Analytical ability Identification, Problem solving ability Discrimination	2 12 7

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations/CVP PROJECT	Learning Outcomes	Integrated Values	No of periods for each chapter
NOVEMBER **25days/25 periods**	Introduction to graphs	Types of graphs 1.Line graph 2.Linear graph *coordinate system * in graphs coordinate system *Some Application in graphs	LAB ACTIVITY/EL: Plot the given points and name the shape so obtained AI: Creating different shapes on graph sheet by Plotting points	➡ Acquires the knowledge of plotting ➡ Acquires the knowledge of plotting the points on the graph ➡ Understands how to draw the line and linear graph ➡ Applies the knowledge of graphical concept in real life situation	Integrated development Independent thinking Comparison Observation Skill of drawing	4
	Mensuration	Area of Trapezium Quadrilateral Polygon Surface area and Volume of Cube Cuboid Cylinder	LAB ACTIVITY/EL: 1.Area of Trapezium Quadrilateral Polygon using Lab kits AI: Making still models of Cube , Cuboid, Cylinder **CVP PROJECT – MENSURATION HUNT** **Work sheet** **Class Test - 9**	➡ Acquires the knowledge of areas and perimeter of different types of polygons ➡ Applies the appropriate formula in doing problems ➡ Acquires the knowledge of Surface area and volume of Cube, Cuboid and Cylinder	Integrated development Independent thinking Observation Imagination Skill of computation	14

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
	Algebraic Expressions and Identities	Terms, factors and coefficients Monomial, binomials and polynomials Fundamental operations of Algebraic Expressions(Addition & subtraction	*LAB ACTIVITY/EL : $(a+b)^2 = a^2 +2ab+b^2$ $(a -b)^2 = a^2-2ab+b^2$ K (a+b+c) **Work sheet** **Class Test - 10**	➡ Acquires the knowledge of terms, factors and co-efficient ➡ Understands the difference between monomial, binomial and polynomials ➡ Apply the concept of fundamental operations of Algebraic Expressions ➡ Learns and understands the Standard Identities and apply appropriate identities in doing problems. Multiplies Algebraic expressions	Integrated development Understanding Application Computation Analytical ability Comparison	7
DECEMBER 19days/19 periods	Comparing Quantities	Increase and Decrease percent Discounts Profit and loss Sales Tax/Value Added Tax Compound Interest Applications of Compound Interest	GROUP ACTIVITY Preparation of formula chart AI: Role play on banking **Work sheet** **Class Test - 11**	➡ Learns and understands the concept of Increase/Decrease percent ➡ Discounts , Profit and loss ➡ Sales Tax/Value Added Tax ➡ Applies the same in real life situation ➡ Acquires the knowledge of Compound Interest in real life situation	Intellectual Development Analytical ability Comparison Skill of Computation Observation	11
	Playing with numbers	Numbers in general form Games with numbers Letters of digits Test of Divisibility	AI: Creating Math puzzle Make puzzle or riddle related to divisibility	➡ Understands the numbers in general form ➡ Understands the games with numbers and letters of digits ➡ Acquires the knowledge of test of divisibility of numbers	Intellectual Development Analytical ability Comparison Skill of Computation	3

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
DECEMBER 19days/19 periods	Factorisation (till Ex-14.2)	Factorising Algebraic Expression using 1.Regrouping terms	AI: Identities - Factorisation using grid paper		Intellectual Development Analytical ability Comparison	5
JANUARY 24days/24 periods	REVISION FOR PT 3					3
	Factorisation(continued)	2.Method of common factors Factorising Algebraic Expression using 3.Identities Division of Algebraic Expressions	Lab Activity/EL : Factorisation of a^2-b^2 **Work sheet** **Class Test - 12**	➡ Acquires the knowledge of division of Algebraic Expressions		**11**
	Exponents and Powers (chemistry – chapter 17- stars and solar system)	Laws of exponents use of exponents to express small numbers in Standard form	AI: PPT on Use of exponents in other subjects Lab activity: Laws of exponents using paper folding **Work sheet** **Class Test -13**	➡ Learns and understands the Laws of exponents ➡ Applies the Laws of exponents in appropriate situation ➡ Understands how to express large and small numbers in Standard form	Intellectual Development Analytical ability Comparison Skill of Computation Observation	**10**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Lab Activities/ Practicals/ Technology integration/Evaluations	Learning Outcomes	Integrated Values	No of periods for each chapter
February (23 days/23 periods)	**REVISION FOR TERM 2**					**14**
	TERM II EXAMINATION					**9**

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CURRICULUM PLANNING (PALLAVUR/ TATTAMANGALAM/ KOLLENGODE)

CLASS: IX SUBJECT: MATHEMATICS **RESOURCE MATERIAL/TEXT: NCERT**

NO. OF UNITS/CHAPTERS: 12 **YEAR: 2023 – 2024**

Month/No. of working days/No. periods	Unit/chapter /Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
JUNE **23 days/** **23 periods** **PROJECT**	1.**Number System** (Integrated with Chapter 4 Heat Physics Class 7)	➢ Rational Number ➢ Irrational Number ➢ Real Numbers and their decimal expansion ➢ Representation of real numbers on the number line ➢ Rationalising the denominator ➢ Laws of exponents ➢ Rational numbers as recurring / terminating decimals. ➢ Operations on Rational Numbers	**1. Lab Activity** ***Spiral Square Root $\sqrt{n}$ Where n = 3,4,5....** **AI: Model Making** **EL: Finding rational numbers in daily life** **Assignment** **Class test**	➢ To be able to understand and identify Rational, Irrational and real numbers ➢ To be able to identify and analyses Real number and their decimal expansion ➢ To be able to represent real numbers on number line ➢ To be able to understand how to rationalise the denominator ➢ To be able to observe and apply the appropriate law	Intellectual Development ● Analytical ability ● Observation ● Classification ● Skill in drawing ● Computation skill	10	18

Month/No. of working days/No. periods	Unit/chapter /Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
June-23 days/23 periods	2.Co-Ordinate Geometry **(Integrated with Chapter 8 Motion Physics)**	*Cartesian System *Co-ordinates of a point in a plane *Names and terms associated with cartisian plane,Notations *Four quadrant	**2.Lab Activity** **Plotting points on a graph sheet** **Assignment** **Class test** **AI: Making different shapes by plotting points** **EL: Locating points on the classroom by considering it as a coordinate plane**	➡ Understands the meaning of Cartesian ➡ Learns how to plot the point in a plane ➡ Learns the meaning of abscissa & ordinate	Intellectual Development ● Analytical ability ● Observation ● skill in drawing & plotting ● *identification	7	7

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
June-23 days/23 periods	**3.Polynomials** **(Integrated with chapter 10 Gravitation Physics)**	➡ Terms related with polynomials ➡ Linear/cubic polynomial ➡ Standard form ➡ Zero of a linear polynomial ➡ Remainder Theorem ➡ Factor Theorem	**using splitting the middle term method** **EL: Finding the real life applications of polynomials**	➡ To be able to understand the general form of a polynomial ➡ To be able to identify the different polynomials ➡ To be able to understand how to find the zero of a polynomial ➡ Learns Remainder theorem and Factor theorem	Intellectual Development *Analytical ability *Observation *Concentration *Skill in Computation.	**6**	**26**
July-23 days/23periods	3.Polynomills (cont)	➡ actorisation of polynomials ➡ Division algorithm Algebraic identities (As mentioned by CBSE)	**using splitting the middle term method** **Assignment** **Class test**	➡ Learns to factorize a polynomial. ➡ Identifies the identity to be used for factorization	Intellectual Development *Analytical ability *Observation *Concentration *Skill in Computation. *Classification *Comparison	**10**	

	4.Lines and Angles (Integrated with chapter 16 Light Physics) **PERIODIC TEST 1**	➧ Basic Terms *Intersecting and non intersecting lines. *Pairs of angles. *Linear pair Axiom. *Vertically opposite angles(proof) *Parallel lines and its properties.	**AI: Formation of parallel lines and transversal and angles** **TI: Real life applications of angles, parallel lines and transversal etc** **Assignment** **Class test**	➧ Learns intersecting and non intersecting lines ➧ Identifies different types of angles ➧ Learns linear pair axiom and understands the difference between straight angle and linear pair. ➧ Learns the theorem Vertically opposite angles and its application. ➧ Learns Parallel lines, its properties &application.	Intellectual Development *Analytical ability *Observation *Concentration *Skill in Computation. *Classification *Comparison	**13**	**15**

Month/No. of working days/No. periods	Unit/chapter /Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
August-20 days/20periods	5.Linear Equations in Two Variables **(Integrated with Chapter 8 Motion Physics class 9)** **PERIODIC TEST 2** 6.Triangles **(Integrated with Chapter 8 Motion Physics class 8)**	➡ Standard form of linear equations in one and two variables. ➡ Solution of linear equations. ➡ Framing of linear equations. ➡ Graph of linear equations. ➡ *Congruence of Triangles ➡ *Criteria for Congruence of Triangles	**3.Lab Activity** ***Representation of linear equations using Graph paper** **AI: Drawing graphs of LE in one variable and two variables** **EL: Applications of LE in daily life** **Assignment** **Class test** **4.LAB ACTIVITY** Exterior angle theorem AI: Establishing the relationship between unequal sides and angle opposite to them in a triangle EL: Identifying the importance of congruence in nature and surroundings	➡ Acquires the knowledge about the standard form of linear equations. ➡ Understands about the solutions of linear equations. ➡ Apply the knowledge of linear equation in framing of linear equations and hence to find solutions ➡ Develop drawing skill and computational skill ➡ Recaptulate the concept of the congruence of triangles ➡ Learns and understands the 4 criteria for congruence of triangles and apply the same in different problems appropriately	Pupil will apply the knowledge of linear equations in daily life situations. Intellectual Development *Analytical ability *Observation *Concentration *Computation skill *skill in drawing & plotting *identification	**10** **10**	**16** **22**

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
September19days/19periods	6.Triangles (Cont.) 7.Heron's Formula **(Integrated with daily life constructions)** **Revision For TERM 1 (5DAYS**	*Some properties of a Triangle Area of triangle by Herons formula	**Assignment based on CBSE board paper** **Class test** **AI: Finding the areas of different triangular patterns** **EL: Applying Heron's formula in daily life situations** **Worksheet** **Class test**	Learns & understands the properties of a triangle Acquires the knowledge of area of triangle by Herons formula. Learns to apply Herons formula in finding Area of quadrilaterals	Intellectual Development *Analytical ability *Observation *Concentration *Computation skill *skill in drawing & plotting *identification Intellectual Development *Analytical ability *Observation *Concentration *Computation skill	**9** **5** **5**	**5**

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
Otobert-21 days/21periods	**Revision For TERM 1 (5DAYS)** **TERM 1 EXAMINATIONS** **8.Circles** (Integrated with Chapter Samudhrthadakah Sanskrit class 8)	*Circles and its related terms *Angle subtended by a chord at a point *Perpendicular from the centre to a chord *Circle through three points	**5. Lab activity** Angle subtended by an arc at the centre is double the angle subtended by an arc at any point on the remaining part of the circle . **6. Lab activity** To verify that the opposite angles of a cyclic quadrilateral are supplementary **AI: Angles in the same segment are equal** **EL: Applying the properties of Circles and cyclic quadrilaterals in real life situations** Worksheet **Class tes**	Identifies circular objects. Learns the terms related to circles *Understands the angle subtended by a chord at a point *Understands the theorem perpendicular from the centre of a chord bisects the chord. *Understands that there is one and only one circle passing through three given non collinear points. *Acquire knowledge of opposite angles of a cyclic quadrilateral is supplementry	Intellectual Development *Analytical ability *Observation *Concentration *Computation skill *Skill of drawing.	**5** **10** **6**	**17**

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
November -25days/25 periods	**8. Circles(Cont)**	➡ *Equal chords and their distances from the centre ➡ Angle subtended by an arc of a circle ➡ Cyclic Quadrilateral			● Intellectual Development ● *Analytical ability ● *Observation	**12**	
	9.Quadrilateral (Integarted with Chapter 14 electric current and its effect Physics)	➡ Types of quadrilateral ➡ Angle sum properties of quadrilateral. ➡ Properties of parallelogram ➡ Conditions for a quadrilateral to be a parallelogram	**7. Lab activity** **To verify the Mid-Point theorem for a Triangle, using paper cutting and pasting** **AI: Model making: Family of quadrilaterals** **EL: Identifying properties of various quadrilaterals in real life situations** Worksheet Class test	➡ Identifies the different types of quadrilaterals. ➡ Learns the angle sum property of a quadrilateral through an activity. ➡ Acquires the knowledge of the properties of the parallelogram. ➡ Able to understand the condition for a quadrilateral to be a parallelogram	● Analytical ability ● Observation	**13**	**13**

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
December-19 days/19 periods	10.Surface areas and volumes (Integrated with chapter 10 Gravitation Physics Class 9)	➡ Surface area of a right circular cone. ➡ *Surface area of a sphere and hemisphere. ➡ Volume of a right circular cone. ➡ *volume of a sphere and hemisphere	**8.Lab activity: Finding curved surface area of a cone**	➡ Understands the surface areas of right circular cone sphere and hemisphere. . ➡ Understands the volumes right circular cone sphere and hemi sphere.	**Intellectual Development** ● **Analytical ability** ● **Observation** ● **Concentration** ● **Computation skill** ● **Skill of solving real life problems**	**14**	**17**
	I1.Introduction to Euclid's Geometry	Euclid's definition, axioms & postulates	Definition and postulates Seminar Class test	➡ Understands the difference between Axiom and Postulate	● **Analytical ability** ● **Observation** ● **Concentration** ● **Computation skill**	**5**	**7**

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration	Learning outcomes	Integrated values	No of periods for each chapter	No of periods as per CBSE
January 24 days/24 periods	12.Statistics (Integrated with Chapter 6 Human resources Social science Class 8)	Definitions *Presentation, analysis and interpretation of data * Graphs **B**ar graph Histogram Frequency Polygon Measures of central tendency .Mean .Median	**9. Lab activity** **Representation of data graphically** **Assignment** **Class test** **AI: Frequency polygon graph** **EL: Computation of mean, median and mode** **SI: Comparison of cricket score** Worksheet Class test	➡ Understands the definition of Statistics ➡ Understands the presentation , analysis and inter relation of data ➡ Learns to plot graphs ➡ Understands the calculation of Mean, Median & Mode.	Intellectual Development *Analytical ability *Observation *Concentration *Computation skill	**15**	**15**
	Revision for TERM 2 EXAMINATIONS	.				**9**	

Month/No. of working days/No. periods	Unit/chapter/Sub theme	Key concepts	Activities/practical/ technology integration/ Evaluation	Learning outcomes	Integrated values	No of periods for each chapter
February 21days	**Revision** **Annual exam**					

CURRICULUM PLANNING (PALLAVUR/TATTAMANGALAM/KOLLENGODE)

CLASS: X **SUBJECT : MATHEMATICS** **RESOURCE MATERIAL /TEXT : NCERT**

NO OF CHAPTERS-14 **YEAR:2023-2024**

Month/ No of working Days/ No of periods	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration /Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JUNE 23days/ 23periods	**1.Polynomials** (Integrated with chapter 10 Gravitation Physics)	➡ Introduction. ➡ Geometrical meaning of zeroes of a Polynomial ➡ Relationship between zeroes & co-efficient of a Polynomial.	**Assignment based on Cbse board paper** **Class test -1** **AI: Splitting the middle term using paper cutting of colour paper** **EL: To understand number of zeroes of the polynomial using graph, Cross word puzzle**	➡ Learns & understands how to find the zeroes from the given graph ➡ Learns & analyses how to relate the zeroes & co-efficient of a given Polynomial ➡ Understands how to apply Division Algorithm for Polynomials & to learn how to find the other zeroes when at least one zero is given ➡ Applies Division Algorithm	Intellectual Development ● Analytical Ability ● Skill of computation ● Classification ● Observation	6 (CBSE 8)

Month/ No of working Days/ No of periods	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration /Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JUNE 23 days/ 23periods	**2.Pair of Linear Equations in Two Variables** (Integrated with Chapter 8 Motion Physics class 9)	➡ Introduction - General form of a system of L.E in two variables. ➡ Graphical method to find the solution of a pair of L.E in two variables. ➡ Algebraic methods to find the solution of a pair of L.E in two variables. (Substitution method Elimination method) • To check the consistency of a pair of L.E in two variables. • Some situational problems	**1.Lab Activity:** To obtain the condition for consistency of system of linear equation in two variable by graphical method Assignment from CBSE board Class test -2 **EL: Finding the real life applications of LE**	➡ Learns the general form of a pair of L.E in two variables ➡ Understands and analyses how to apply the three algebraic methods to solve a pair of L.E in two variables ➡ Learns & understands the consistency of a pair of L.E in two variables & how to apply it in the problem. ➡ Learns & understands how to solve a pair of L.E in two variables graphically. ➡ Learns & analyses how to solve equations reducible to linear form. ➡ Acquires knowledge how to transfer the word problems to a pair of L.E in two variables	**Intellectual Development** ● Skill of computation ● Classification ● Comparison ● Analytical ability	8 (CBSE-15)

Month/ No of working Days/ No of periods	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ technology integration /Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JUNE 23 DAYS/23 PERIODS	**3.Probability** **(Integrated with Geography- weather forecasting)**	❖ Theoretical Approach to Probability ❖ Simple problems on finding the probability of an event.	**AI: Flowchart: Deck of cards** **EL: Tossing a coin thrice and finding the outcomes** **Assignment** **Class test-3**	Learns and Understands the theoretical Approach of Probability Acquires the knowledge how to apply probability in word problems	Intellectual Development Classification Differentiation Observation Analytical ability Skill of computation	**4** (CBSE 10)
	4.Triangles **(Integrated with Chapter 8 Motion Physics class 8)**	Introduction Similar figures Difference between congruence & similarity	**AI:**Warli painting by using congruent and similar figures	Learns the definition of Acquires the knowledge about the difference between the Congruence & Similarity	Intellectual Development Classification Differentiation Observation Analytical ability Skill of computation	**5 (CBSE 15 periods)**

Month/ No of working Days/ No of periods	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ technology integration /Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JULY **23/23DAYS** **PERIODS**	**4.Triangles** **(Integrated with Chapter 8 Motion Physics class 8)**	➡ Basic Proportionality Theorem(BPT)& its Converse ➡ Criterion for similarity of Triangles	**EL: Finding different patterns of similar figures from real life situations** **Assignment** **Class test-4** **2.Lab Activity** **Thales Theorem**	➡ Learns and Understands BPT,its Converse and how to apply it in problems. ➡ Learns & understands the theorem of Areas of Similar Triangles, Pythagoras and its Converse and how to apply it in problems.	Intellectual Development ● Classification ● Differentiation ● Observation ● Analytical ability Skill of computation	**5 (CBSE15 periods)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Con cepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JULY **23/23DAYS** **PERIODS**	**5.Introduction to Trigonometry** (Integrated with Class 9 Physics Sound- Applications of Sonar)	❖ Introduction ❖ Trigonometric Ratios(T-ratios) ❖ T-ratios of some specific angles(0,30,45,60 ,90) ❖ Trigonometric Identities	**3. Lab activity** **Trigonometric ratios** **Worksheet / Assignment based on cbse board paper** **Class test -5** **AI: Magic hexagon** **TI: Tricks to learn trigonometric ratios of specific angles**	➡ Acquires the knowledge about T-ratios & how to apply it in real time situations. Learns & Understands the basic idea about Trigonometry ➡ Learns & understands T-ratios of some specific angles & how to apply it in problems ➡ Learns, understands and analyses T-ratios of complementary angles & how to apply it in problems. ➡ Learns & understands the Trigonometric Identities & how to apply it in problems	Intellectual Development ● Analytical ability ● Concentration ● Skill of Computation ● Observation	**10(CBSE-25)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration/Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
JULY 23 DAYS /23 PERIODS	**6.Coordinate Geometry** (Integrated with Chapter 8 Motion Physics)	❖ Introduction ❖ Graph ❖ Distance Formula ❖ Section Formula ❖ Centroid of a Triangle	**Worksheet / Assignment based on CBSE board paper and digital board** **Class test -6** **EL :Area of a triangles using graph paper by counting the numbers of squares as well by using formula** **AI : Draw a figure in the graph and find the distance between the segments**	➡ Learns and understands how to derive distance formula and how to apply in problems. ➡ Learns and acquires knowledge how to derive section formula and apply it in problems. ➡ Acquires the knowledge of applying area of a triangle and its centroid in different problems appropriately	● Intellectual Development ● Analytical ability ● Comparison ● Skill of Computation ● Observation	**8 (CBSE - 15)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
AUGUST **20DAYS/20 PERIODS**	**7.Statistics** (Integrated with Chapter 6 Human resources Social science Class 8)	Arithmetic Mean of an Ungrouped Data Three methods to find the A.M of a grouped data a)Direct Method b)Assumed Mean Method c)step deviation method. Mode of a grouped data Median of a grouped data	**Assignment based on cbse board paper** **4. Lab Activity** **Ogive** **Class test-7** **EL: Finding the mean, median and mode of the data collected** **SI: Comparison of cricket score**	Learns & analyses how to find the A.M of an ungrouped data. Learns & analyses how to find the A.M of a grouped data using the three different methods. Learns and analyses how to find the Mode of a grouped data. Learns and analyses how to find the Median of a grouped data. Acquires knowledge how to draw the Less than Ogive, More than Ogive & Median graphically	Intellectual Development Analytical ability Skill of Drawing Skill of Computation Classification	**10 (CBSE -18)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
AUGUST 20 DAYS/ 220PERIODS	**8.Real Numbers** (Integrated with Chapter 4 Heat Physics Class 7)	• Introduction • Fundamental theorem of Arithmetic. • Revisiting Irrational numbers.	**Worksheet / Assignment based on CBSE board paper** **Assignment based on CBSE board paper** **Class test-8** **EL: Finding HCF using coins / blocks** **Finding LCM using paper strips** **TI: Powerpoint presentation for finding HCF and LCM**	➡ Learns FTA & understands how to apply it to find the HCF & LCM of numbers. ➡ Understands the different types of Rational Numbers& learns to differentiate Terminating & Non-Terminating ➡ Applies concept of real numbers in daily life	● Intellectual Development ● Analytical Ability ● Skill of computation ● Concentration ● Comparison	**7(CBSE -15)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
AUGUST 20 DAYS/ 20PERIODS	**9.Quadratic Equations (Q.E)** (Integrated with Chapter 8 Motion Physics class 9)	Introduction Standard form of Q.E Solution of a Q.E by 1.Factorisation,	**Worksheet / Assignment based on CBSE board paper** **Class test -9** **AI: Finding the area of a rectangle geometrically**	➡ Acquires knowledge about the standard form ➡ Acquires knowledge about how to find the solution using different methods ➡ Understands the relation between the Discriminant and nature of roots. ➡ Learns how to form equations from word problems and solve	● Intellectual Development ● Analytical ability ● Concentration ● observation ● Skill of Computation	**3 (CBSE-15)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
SEPTEMEBER 19DAYS /19PERIODS	**9.Quadratic Equations (Q.E)** (Integrated with Chapter 8 Motion Physics class 9) **10.Circles** (Integrated with Chapter Samudhrthadakah Sanskrit class 8)	2.Quadratic formula Relationship between Discriminant & nature of roots Word problems *Introduction *Tangent to a circle *Number of Tangents from a point on a circle	**EL: Applying the concept of QE in real life situations** **8.Lab Activity** **Tangents drawn from an external point** **Assignment based on CBSE board paper** **Class test-13** **AI: Mandala Art** **TI: Using Rhombo compass** **REVISION TERM 1**	➡ Acquires knowledge about how to find the solution using different methods ➡ Understands the relation between the Discriminant and nature of roots. *Learns and understands the concept of tangents *Acquires the knowledge how to apply applications of tangents in problems	● Intellectual Development ● Analytical ability ● Concentration ● observation ● Skill of Computation Intellectual Development ● Analytical ability ● Concentration ● Skill of Computation ● Observation ● Observation ● Skill of drawing	**6(CBSE - 15)** **8(CBSE -10)** 5DAYS

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
OCTOBER 21 DAYS /21 PERIODS	**11.Area Related to Circles** (Integrated with Chemistry Class 9 Matters in our surroundings)	• **Area of sectors and segments of circle** • **Problems based on Area and perimeter.**	**REVISION TERM 1 EXAM 10DAYS** **Worksheet / Assignment based on CBSE board paper** **Class test-10** **AI: To know about the circular patterns and its representation through art** **EL: Applying the concept sectors and segments in real life situations** **SI: Finding the area of tracks**	Understands area and circumference of a circle Learns and understands the sector and segment of a circle. Acquires knowledge and analyses how to find the area of segment of a circle Acquires knowledge how to find the area of combination of plane figures	Intellectual Development • Analytical ability • Comparison • Skill of Computation • Observation • Skill of drawing	**4DAYS 10 DAYS** **7(CBSE 12)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
NOVEMBER 25DAYS /25 PERIODS	**12.Arithmetic Progression** (AP) (Integrated with Biology- Beehives, Sunflower petals)	❖ Introduction ❖ Definition n^{th} term of an AP ❖ Sum to n terms of an AP Applications of AP	**5.Lab Activity** **To verify whether the given sequence is an A.P** **6.Lab Activity** **To verify the sum of first n natural numbers as [n(n+1)]/2** **EL: Stacking the cups or building a house of cards or arranging match sticks used to make a triangle,square , pentagon, hexagon….** **AI:Pattern drawing, identifying patterns from nature.** **Assignment based on CBSE board paper** **Class test-11**	Learns and understands the definition of an AP Acquires knowledge about nth term of an AP Learns and understands how to find the sum to n terms of n AP Analyses how to apply AP in word problems	Intellectual Development Analytical ability Comparison Skill of Computation Observation	**8 (CBSE - 10)**

Month/ No of working Days/ No of periods per subject	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
NOVEMBER 25DAYS /25 PERIODS	**13.Applications of Trigonometry** (Integrated with Class 9 Physics Sound- Applications of Sonar)	❖ Angle of Elevation ❖ Angle of Depression ❖ Application of Trigonometry (Word problem)	**7.Lab Activity** **.Finding the unknown heights using clinometer** **AI: Role play** **EL: Finding the height of a tree** **Class test-12**	➡ Understands the concept of angle of elevation ➡ Learns angle of depression ➡ Understands the difference between elevation and depression ➡ Learns to draw the figure ➡ Develops skill in drawing and computation	Intellectual Development ● Analytical ability ● Comparison ● Skill of Computation ● Observation Intellectual Development ● Analytical ability ● Comparison ● Skill of Computation ● Observation	**8(CBSE10)**

Month/ No of working Days/ No of periods	Unit/ Chapter/ Sub theme	Key Concepts	Activities/ Practicals/ Technology integration Evaluation	Learning Outcomes	Integrated Values	No of periods for each chapter
NOVEMBER 25DAYS /25 PERIODS **Revision**	**14.Surface Areas & Volumes** (Integrated with chapter 10 Gravitation Physics Class 9) EXAM EXAM	*Surface areas of combination of solids *Volume of combination of solids	9.Lab Activity Curved Surface area of a Right circular cone Assignment from Cbse board paper Class test 15 AI: Conversion of sector to cone and hence to find the TSA EL: Making cylinder from rectangle and finding CSA and TSA	➡ Learns and understands how to calculate the surface area of combination of solids. ➡ Acquires the knowledge about the volume of combination of solids & how to solve problems related to it.	Intellectual Development ● Analytical ability ● Comparison ● Skill of Computation ● Observation	**9(CBSE 12)**

CURRICULUM PLANNING (PALLAVUR ,TATTAMANGALAM & KOLLENGODE) 2023-24

Class :XI Subject : MATHEMATICS Resource Material : NCERT Text book for class XI No. of chapters: 14

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration/Evalaution	Learning outcomes	Integrated values	No. of periods for each chapter
JUNE 23 DAYS /23 periods(As new session starts in the 2nd week)	Sets *[Computer-Relational Algebra-SQL-class 11]* Relations And Functions *[Computer-Relational Algebra-SQL-class 11]* Trigonometric Functions	Sets and their representations *Types of sets *Venn diagrams *Operations on sets Cartesian product of sets *Relations *Functions *Product of the sets -R x R x R *Sum, difference, product, quotient of functions Angles *Trigonometric functions	Operations on sets using Venn diagrams AI-types of sets sketching from nature & surrounding EL-Activity-Venn diagram (Lab activity) (Assignment/Class Test) AI-slideshow diff types of functions EL-Explaining the graphs of functions-using different tools (Lab activity) (Assignment /Class Test)	*Acquire knowledge about sets , its representations, Venn diagrams and its applications *Understand about representation and operations on sets *Apply the operations in doing problems *Develop skill in drawing and computation *Acquire knowledge about Cartesian products, relations and functions *Understand the method of obtaining Cartesian product of sets, difference between relations and functions *Apply the concept of Cartesian products, functions and relations *Develop computation *Acquire knowledge about angles, trigonometric functions.	Intellectual development •Ability of comparison •Independent thinking •Speed and accuracy Universal outlook Intellectual Development •Analytical ability •power of observation •Ability of comparison *Mental development Intellectual development Ability of comparision	10(CBSE 20) 10(20) 3

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration/Evaluation	Learning outcomes	Integrated values	No. of periods
JULY (23days /23periods)	Trigonometric Functions (contd) *[Physics-all chapters in class 11 Computer-Std.Library functions]*	Trigonometric functions of difference and sum of 2 angles Trigonometric equations	AI-Video making the graphs of functions EL –Activity on negative and positive angles (lab activity) (Assignment /Class Test)	*Acquire knowledge about sum and differences of 2 angles of trigonometric functions, trigonometric equations. *Understand about angles, trigonometric functions, *Apply the formulae for finding the sum and difference of angles, *Understand about solving trigonometric equations *Apply the formulae for finding the solution of trigonometric equation.	Intellectual development •Ability of comparison •Speed and accuracy *Power of observation	13(20)
	Permutations and Combinations *[Comp-Applications of factorial-Python Programming]*	Fundamental Principle of counting *Factorial notation *Derviation of nP_r and nC_r	EL:Lab Activity arrangement of objects AI: Film making-Real life Analogy of P& C	*Develop computational skill Acquire knowledge about Fundamental Principle of counting, factorials, permutations and combinations. *Applies the knowledge for computation of nP_r and nC_r	Intellectual Development *Speed and accuracy •Power of observation •Ability of comparison	10(10)
August (20days /20periods)	Probability	*Exhaustive events and mutually exclusive events *Theoretic approach	EL:Students will be asked to develop at least two questions from real life related to the concept Lab activity – Addition theorem of probability.	*Acquire knowledge about exhaustive events and mutually exclusive events	Intellectual development •Ability of comparison •Speed and accuracy *Power of observation	10(20)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
September (19days /19periods) (12 TEACHING PERIODS,7 PERIODS	Probability *[Biology-Principles of inheritance & variation]*	*Addition theorem on probability	AI-slide show – application of probability in various games (Assignment /Class Test)	*Understand the addition theorem on probability *Apply addition theorem of probability in doing problems *Develop computational skill	Intellectual development •Independent thinking •Power of observation •analytical ability	
	Complex Numbers and Quadratic Equations *[Physics-Rotational Motion class 11]*	Complex number and its operations *Modulus and conjugate of a complex number Argand plane	EL:Evolution of complex numbers using various tools . AI -Research on Real life application of complex numbers as presentation. (Assignment /Class Test)	*Acquire knowledge about complex numbers, its operations and polar form. *Understand about modulus and conjugate of a complex number and polar form *Apply the concept of polar form *Develop computational skill	Intellectual development •Ability of comparison •Independent thinking	10(10)
	Binomial Theorem *[Physics-Kinetic Theory]*	*Introduction to Binomial theorem. *Pascal's	AI;Collage making-Contribution of Ancient Indian Mathematicians in B.T EL: Pascal's Triangle	*Acquire knowledge about Binomial theorem *Understand about binomial theorem for positive integral values *Apply binomial theorem	Intellectual development •Power of observation •Independent thinking Intellectual development •Power of observation •Independent thinking	4(10)

FOR REVISION)	Linear Inequalities *[Computer-Mat Plot]*	Triangle Binomial theorem for positive integers *Solving linear inequations algebraically * Graphical method of solving (deleted)	(Assignment /Class Test AI:Geogebra EL:Drawing the graphs of linear inequations. (Lab activity) (Assignment /Class Test	*Acquire knowledge about system of linear inequations *Understand about solving of linear inequations *Apply the method of solving in doing problems *Develop drawing and computational skill	Intellectual development •Power of observation •Independent thinking	8(10)
October (21days /21periods) 8-Teaching days 13 days Revision & exam	Sequences and Series *[Bio-Plant growth & development class 11]*	A M GP Sum to n terms of GP Relation between AM and GM	(Assignment /Class Test)	*Develop computational skill *Acquire knowledge about AP &GP *Understand about AP & GP *Apply the concept of AM & GM in doing problems	Intellectual development •Ability of comparison •Power of observation	8(10)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
November (25days /25periods)	Straight Lines(contd) *[Phy-Motion in a line and a plane]*	Slope of a line Various forms of equations of a line(Half portion) General equation of a line (deleted) Distance of a point from a line	AI:Art Gallery-Highlighting different types of St.lines EL – Identifying application of slopes in daily life situations. (Assignment /Class Test)	*Acquire knowledge about slope of a line *various forms of equations of a line and general form of a line *Understand about various forms of equations of a line *Apply various forms of equations in doing problems	Intellectual development •Ability of comparison •Power of observation •Independent thinking	12(15)
	Three Dimensional Geometry *[Phy-All chapters]*	Coordinate plane in 3 dimensions *Distance formula *Section formula(deleted)	AI:Slide show EL-Application of 3D in Architecture & Interior Designing .	*Acquire knowledge about three dimensional geometry *Understand coordinate planes and section formula *Apply section formula *Develop computational skill	Intellectual development •Ability of comparison •Power of observation	13(10)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
December (19days /19periods)	Conic Sections *[Phy-Gravitation]*	*Sections of a cone *Standard equations of a circle parabola, Ellipse *Straight line and a pair of intersecting lines as a degenerated case of a conic section	AI: Model Making different sections of a cone . Lab activity – Graph of parabola . EL - coordinate axes. Assignment/class test	*Acquire knowledge about three dimensional geometry *Understand coordinate planes and section formula *Apply section formula *Develop computational skill	Intellectual development •Analytical ability •Power of observation •Ability of comparison	15(25)
	Conic section (contd)	Standard equations of a hyperbola		*Acquire knowledge about conic sections *Understand about standard equations of various conic sections *Apply knowledge of conic sections in doing problems *Develop computational skill		
	Limits and Derivatives *[Phy-All Chapters]*	Concept of limits and derivatives		*Acquire knowledge about limits and derivatives *Understand the limit of functions, derivatives of polynomial and trigonometric functions	Intellectual development •ability of comparison	4

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
January (24days /24periods) 12-Teaching periods 12-Revision	Limits and Derivatives *[Phy-All Chapters]* Statistics *[Economics-Statistics]* Annual Exam	Concept of limits and derivatives Derivative of sum, difference product and quotient rule of functions Measures of dispersion, Mean deviation(MD), varience Standard dewviation of grouped and ungrouped data	Worksheet /Assignment/class test Worksheet /Assignment Lab activity - Calculation of MD AI: Survey Report	*Acquire knowledge about limits and derivatives *Understand the limit of functions, derivatives of polynomial and trigonometric functions *Develop computational skill *Apply limits in doing problems *Develop computational skill *Acquire knowledge about MD *Understand about MD *Apply the concept of MD *Develop computational skill	Intellectual development •ability of comparison •power of observation •speed and accuracy Universal outlook Intellectual development •Ability of comparison •Power of observation •Speed and accuracy.	8(40) 4
February						

CURRICULUM PLANNING (PALLAVUR ,TATTAMANGALM & KOLLENGODE) 2023-24

Class :XII Subject : MATHEMATICS

ATICS Resource Material : NCERT Text book for class XII No. of chapters: 13

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration/Evalaution	Learning outcomes	Integrated values	No. of periods for each chapter
JUNE (24days/ 24periods)	Linear Programming (LPP)*[Computer-Mat Plot* Inverse Trigonometric Functions*[comp-Std.library functions]*	*Basic definitions *Graphical method * feasible and in feasible region (bounded or unbounded) *solving LPP to find the optimal solution *Basic concepts *Range,domain,principal value branch *Graph of ITF	*Solving LPP graph Assignment/class test AI: Geogebra El- Computation of optimal solution.(Lab activity) Assignment / Class test AI: Slide show Graph of Inverse trigonometric functions El- Comparison of graphs. Assignment/class test	*Acquire knowledge about mathematical formulation of LPP *Understand about the method of solving LPP to find the optimal solution *Apply the knowledge of LPP in solving problem *Acquire knowledge about inverse trigonometric functions and its properties *Understand about the properties *Apply the properties in doing the problem *Develop skill in computation	Intellectual development *Apply the concept of LPP in solving problems in daily life situations *Mental development *Universal outlook Intellectual development *Analytical ability *Ability of computation	5(cbse 20) 4(15)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration/Evaluation	Learning outcomes	Integrated values	No. of periods	
JUNE (23days/ 23periods)	Matrices and Determinants *[comp-2D Array]* Continuity & Differentiability *[Phy-all chapters]*	*Types of matrices *Operations on matrices *Symmetric and skew – symmetric matrices *Invertible matrices *basic concepts of determinants, *Area of triangle *Consistency , inconsistency and number of solutions. *Continuity *Logarithmic differentiation *Derivatives of parametric functions	*Worksheet based on HOT questions *Assignment based on repeated board questions /class test AI: Video making – Real life applications of Matrices & Determinants. EL – Graph of continuous functions.(Lab activity)	*Acquire knowledge about types of matrices, operations of a matrix *Understand different types of matrices and their operations *Apply the operations in doing problems *Develop computational skill. *Acquire knowledge about continuity and differentiability	Intellectual development • Logical thinking • Speed and accuracy • Power of observation • Universal outlook Apply the concept of matrices in other fields. Intellectual development • Speed and accuracy • Power of observation Logical thinking	7(50) 7(20)	

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
JULY (23days /23periods)	Continuity & Differentiability (contd) VECTORS *[Phy-Motion in a plane]*	• Second order derivative • Types of vectors • Addition of vectors • Product of vectors	AI -Flow charts &Mind maps –key concepts EL-Graphs of different functions (Interactive board) Assignment/class test. AI: Slide show Application of 3D in Astronomy. EL- Angle in a semicircle (Lab activity) *Assignment based on repeated board questions/class test	• Understand the concepts of continuity and differentiability • Apply the knowledge in doing problems Develop computational skill. • Acquire knowledge about vectors, addition and product of vectors • Understand the concept of vectors and their products • Apply vectors in doing problems • Develop skill in drawing and computation	Intellectual development • Speed and accuracy • Power of observation Logical thinking Intellectual development • Ability of comparison • Independent thinking	4 4(15)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
JULY (23days /23periods)	Three Dimensional Geometry(3 D) *[Phy-all chapters]* Probability *[Bio-Principles of inheritance & variation]*	*Direction ratios and direction cosines *Equation of a line in space Shortest distance *Angle between two lines • Conditional probability • Baye's theorem • Probability distribution	Interactive Board-Introduction about 3D Assignment/class test AI: Research on how Probability is incorporated in weather planning as presentation . EL – Conditional probability .(Lab activity)	*Acquire knowledge about equation of a line and of a plane. *Understand the concepts of line and plane *Apply the knowledge in doing problems *Develop drawing and computational skills • Acquire knowledge about conditional probability, Baye's theorem, probability distribution • Understand the independent events, random variable and its probability distribution • Apply multiplication Baye's theorem. • Develop computational skill`	Intellectual development • Power of observation • Analytical ability • Independent thinking Intellectual development • Power of observation • Ability of comparison • Analytical ability • Speed and accuracy • Universal outlook	10(15) 5(30)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
AUGUST (20days /20periods)	Probability (contd) Integrals *[Phy-all Chapters]*	*Mean of random variable *Methods of integration *Integrals of some particular functions *Integration by substitution,partial fraction and parts.	*Assignment/ class test *Assignment based on repeated board questions /class test AI:Video Making-Contribution of calculus in the field of medicine	*Apply binomial distribution in doing problems. *Develop computational skill. • Acquire knowledge about integration, different methods of integration • Understand about integration, methods of integration, • Apply the methods of integration in doing problems • Develop skill in computation	Intellectual development *Power of observation *Ability of comparison *Analytical ability Universal outlook Intellectual development *Power of observation *Ability of comparison *Analytical ability *Speed and accuracy Universal outlook	5 15(20)

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
SEPTEMBER (19days /19periods) 6 days revision for term 1	Integrals (Contd) Applications of Integrals *Phy-all Chapters]*	* fundamental theorem of calculus.(without proof) *Definite Integrals & its properties • Area under simple curves(lines,circle, parabola,ellipse)	EL – Computation of area under a curve. (Lab activity) AI:Video Making-Contribution of calculus in the field of medicine *Assignment based on repeated board questions/class test *Representation of shaded portion (Interactive board)	*Apply properties in doing problems. * Develop skill in computation *Acquire knowledge about area under a curve *Apply integrals in finding the area Develop computational skill,drawing •	Speed and accuracy Universal outlook Intellectual development	4 7(15) 8

Month / No. of Working Days / No. of periods	Unit/ chapter/ sub theme	Key concepts	Activities/ Practicals/ Technology Integration	Learning outcomes	Integrated values	No. of periods for each chapter
October (21days /21periods) 8-Teaching days 13 days Revision & exam	Differential Equations (D.E) *[Phy-Oscillations* Relations and Functions *[comp-Relational Algebra-SQL]*	*General and particular solution of a differential equation *Methods of solving first order first degree differential equations *Types of relations	*Interactive Board-General and particular solution of D.E Assignment/ class test AI :One –onto functions sketching from nature & surroundings	*Acquire knowledge about differential equations, their order and degree, formation of differential equations and solution of differential equations Understanding about differential equations, their order, degree, formation and solution • Acquire knowledge about equivalence relations, one – one and onto functions, composite functions, inverse of a function and binary operations • Understand about different types of relations and functions • Apply the concept of equivalence	*Power of observation *Ability of comparison *Concentration Intellectual development *Analytical ability *Power of observation Speed and accuracy Intellectual development *Ability of	5(15) 3(15)

NOVEMBER (25days /25periods) Revision	Relations and Functions (conti) Application of Derivatives *[Phy-all chapters]*	 *One – one and onto functions *Rate of change of quantities	EL- Types of functions (Two Lab activities) Assignment/class test *Comparison of surface area, volume, distance	relation, inverse of a function and binary operation • Develop computational Skill *Acquire knowledge about how the derivative can be used to determine rate of change of quantities.	comparison *Power of observation Independent thinking Intellectual development *power of observation *ability of comparison	12 13(10)

DECEMBER (19days /19periods) JANUARY (22days /22periods)	Application of Derivatives *[Phy-all chapters]*	• Increasing and decreasing functions • Maxima and minima Pre Board Revision	AI: Research on real life applications of derivatives EL: Activity – Solid shapes volumes/sum of two numbers – maximize. (Lab activity)	• To find the equations of tangents and normal and to find approximate value of certain quantities	Intellectual development • power of observation • ability of comparison	5