



DISTRICT INSTITUTE OF EDUCATION AND TRAINING

Settikarai - 636704

Dharmapuri.

Action Research document.

**Enhancing Functional Numeracy among III Standard Students by Activity-
Based Method.**

by

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Submitted to



**State Council of Educational Research
and Training Tamilnadu**

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Dr P.Govinda Prakash, M.Sc., M.Ed., M.Phil., Ph.D.,

Principal,

District Institute of Education and Training,

Settikarai,

Dharmapuri – 636 704.

Certificate

This to certify that the action research study entitled **“Enhancing Functional numeracyamong III Standard students by activity based method”** submitted by Dr CG.Elangovan , M.Sc., M.Ed., M.Phil., Ph.D., Senior Lecturer, District Institute of Education and Training, Settikarai, Dharmapuri is an original work done by him during the year 2023 under my supervision .

Place: Dharmapuri.

(Dr P. Govinda Prakash)

Date:

Principal

CG.ELANGO VAN, M.Sc., M.Ed., M.Phil., Ph.D.,

lecturer,

District Institute of Education and Training,

Settikarai,

Dharmapuri – 636 704.

DECLARATION

I hereby declare that this is action research study report entitled **“Enhancing Functional numeracy among III standard students by activity based method”** submitted by Dr CG.Elangovan , M.Sc., M.Ed., M.Phil., Ph.D., Lecturer, District Institute of Education and Training, Settikarai, Dharmapuri is an original work done by me during the year 2023 under the supervision of **Dr P. Govinda Prakash, M.Sc., M.Ed., M.Phil., Ph.D.,** Principal, District Institute of Education and Training, Settikarai, Dharmapuri.

Place: Dharmapuri

Signature of the Investigator.

Date:

(CG.ELANGO VAN)

ACKNOWLEDGEMENT

I express my sincere and whole hearted thanks to the most revered and respected Director and the Joint Directors, SCERT, Chennai -600006 for permitting me to select a research problem and carry out the action research in the Government school during the year 2023.

I express my sincere thanks to **Dr P. Govinda Prakash., M.Sc., M.Ed., M.Phil., Ph.D.,**Principal, Senior lecturer and lecturers in District Institute of Education and Training, Settikarai, Dharmapuri for helping me in various stages of this work.

I extend my sincere thanks to **Zonal committee members of** District Institute of Education and Training, Salem, Dharmapuri and Namakkal for guiding and supporting me to choose the topic.

Also,I extend my sincere thanks to **Dr P. RAMALINGAM, M.Sc., M.Ed., M.Phil., P.h.D.,** Principal and Mathematician of District Institute of Education and Training, G. Ariyur, Villupuram for continuous guiding and supporting me in various stages of this splendid work.

CG.Elangovan.

Research practioner.

“Enhancing Functional numeracy among III standard students by activity-based method”.

1. Introduction:

Educators and researchers need valid and reliable measures to perform a trustworthy and meaningful assessment of students' numeracy skills. Measures with optimal discriminative power are required to identify students who may need additional support via interventions. There is increasing recognition that current mathematics curricula do not adequately equip pupil to use and apply mathematics effectively in different spheres of their lives, for example, as learners, citizens and workers. Concerns about inadequacies of current mathematics curricula have been raised in many countries; there is perhaps some convergence of mathematics curricula because of the international comparative studies that measure students' performance in mathematics and the resulting pressure on nations to improve their position in international league tables. Terms such as 'quantitative literacy', 'mathematical literacy', 'numeracy', and now in the UK, 'functional mathematics', have been used to try to capture the essence of what might form a new curriculum that ensures that people are in future better equipped to use mathematical knowledge and skills in a way that empowers them to solve problems and be able to make critical and informed choices based on quantitative information.

Numeracy skills can be divided into early numeracy (EN; Aunio & Räsänen, 2016) and functional numeracy (FN; Geary et al., 2013) skills. EN includes counting skills, basic arithmetic skills, understanding numerical relations, and symbolic and non-symbolic number sense (Aunio & Räsänen, 2016). These skills provide the basis for the development of FN skills

in children aged 9 to 12 years. FN skills include whole number arithmetic, fractions, simple algebra, and measurement as part of problem-solving skills (Geary et al., 2013). Furthermore, the overall concept of FN refers to the fundamental mathematical skills that develop during formal schooling, which are necessary for success in work life in adulthood. Insufficient development in these skills may lead to mathematical learning difficulties, which once established, may be very persistent (e.g., Geary 2011; Vanbinst et al. 2014), leading to devastating problems in later adolescence (Hakkarainen et al., 2015) and adulthood (Geary, 2011). Thus, it is essential to assess children's FN skills regularly in the upper elementary grades when the demands for mastery of FN skills increase significantly (Gersten et al., 2012). For this purpose, teachers need valid and easy-to-use FN measures. Yet, there is a lack of synthesis of the characteristics and psychometric reporting of measures targeting the FN skills of 9–12-year-old children. Hence, general agreement among researchers and educators about the quality of the measurement properties of the measures that are being used to assess children's FN skills is missing. Psychometric reviews can support educators and researchers in selecting measures that are most suitable based on their measurement characteristics and reporting of their measurement properties to identify children in need of additional support when learning mathematics.

2. Foundations in learning: Literacy & Numeracy

We believe that every learner is a unique individual with their own strengths, interests, and areas for growth. We support engaging and meaningful learning opportunities that are responsive to student needs and contexts. Our learners have access to an abundance of information, resources and people and these opportunities require a diversity of skills and approaches. Thinking critically,

collaborating successfully, communicating effectively and demonstrating new learning in multiple formats are all foundational elements of learning design.

The Ministry of Education defines *literacy* as “the ability to understand, critically analyze, and create a variety of forms of communication, including oral, written, visual, digital, and multimedia, to accomplish one’s goals. Literacy helps students apply reading, writing, speaking and listening skills across a variety of subject areas.” *Numeracy* is “the ability to understand and apply mathematical concepts, processes, and skills to solve problems and make decisions in a variety of situations, including real-life scenarios.”

Our strategic plan includes the following steps related to literacy and numeracy

- Fully incorporating First Peoples’ Principles of Learning into our literacy and numeracy strategies
- Improving Inner-city Early Learning
- Improving and adapting teacher mentor and leadership programs
- Re-emphasizing our commitment to Literacy for the 21st Century throughout the curriculum.

3. Principles of learning

- (i) Learning is connected to the broader community and extends beyond the walls of the classroom and school. Connecting learning with community members, parents and extended family reinforces the links between school and other aspects of the learner’s life.
- (ii) Deep learning engages the whole student (and teacher) – heart, mind, body and soul. When we work together, collaborate conceptually, and combine our energies to reinforce commonalities across multiple subject areas, we make learning cohesive,

connected and relevant. The relationships teachers develop and foster with their students is essential to student success.

- (iii) All learners can benefit when oral methods are used to recall and recount the past. Stories help all of us make meaning of life and allow us to step out of our own shoes, see differently, and increase our empathy for others.
- (iv) Learning begins with a positive self-identity. Exploring their own identities in a safe learning environment helps students develop empathy towards their peers, build stronger relationships, and dispel stereotypes and perceptions about other cultures and groups of people.

4. Functional Math skill:

Before students can understand numbers and numeration, they have to understand one-to-one correspondence. As they count, they need to be able to match each item or items to a corresponding number and understand that the number represents a matching or a corresponding number of items. One-to-one correspondence will also be helpful in such household tasks as setting the table and matching socks. Other functional skills include:

- **Number recognition:** This includes recognizing and being able to write the 10 digits, and then recognizing place value: ones, tens, and hundreds.
- **Skip counting:** Skip counting by 5's and 10's to 100 is important for understanding time (such as five-minute increments on an analog clock) and money. Teachers can use a hundred's chart or on a number line to demonstrate skip counting.
- **Operations:** It's vital for students to have a grasp of addition and subtraction.

At a later point, if your students have an understanding of these two operations, it may be possible to introduce multiplication and division. Students with special needs may not be able to develop the ability to do the math operations themselves independently, but they can learn how the operations are used in order to use a calculator to do calculations, like balancing a bank statement or paying bills.

(i) Time

Time as a functional skill involves both understanding the importance of time—such as not staying up all night or not missing appointments because they don't leave enough time to get ready—and telling time on analog and digital clocks to get to school, work, or even the bus on time.

Understanding time requires comprehending that seconds are fast, minutes almost as fast, and hours much longer. Students with disabilities, especially significant cognitive or developmental disabilities, may have behavioural outbursts because they are "stuck" on preferred activities, and don't realize they will miss lunch. For them, building an understanding of time may involve a visual clock, like a Time Timer, or a picture schedule.

These tools help give students a sense of control over their schedule and an understanding of what happens and when during their school or even home day. Parents may also benefit from having visual schedules at home. For children with autism spectrum disorders, it can help avoid long periods of self-stimulatory (stimming) behavior, which may actually undermine progress they are making at school.

Teachers can also pair telling time with understanding the concept of time, for example, that 6 a.m. is when you get up and 6 p.m. is when you eat dinner. Once

students can tell the time to the hour and half-hour, they can progress to skip counting by fives and telling time to the nearest five-minute interval. A geared clock, such as a Judy clock—where the hour hand moves when the minute hand goes around—helps students understand that both hands move together.

(ii) Money

Money, as a functional math skill, has several levels of skill:

- Recognizing money: pennies, nickels, dimes, and quarters.
- Counting money: first in single denominations and later mixed coins
- Understand the value of money: budgets, wages, and paying bills

(iii) Measurement

Learning measurement for students with special needs should involve length and volume. A student should be able to use a ruler and even perhaps a tape measure for length and recognize inches, half and quarter inches, as well as feet or yards. If a student has an aptitude for carpentry or graphic arts, the ability to measure length or size will be helpful.

Students should also learn volume measurements, such as cups, quarts, and gallons. This skill is useful for filling tubs, cooking, and following directions. When cooking is part of a functional curriculum, a knowledge of measures of volume will be helpful. Students should be able to choose what they will cook, and find and read recipes. Familiarity with measuring volume will help students who want to pursue work in culinary arts, such as a kitchen assistant.

***EN- Early Numeracy. *FN - Functional Numeracy.**

5. Need of the Action Research:

The aim of the action research is to enhance functional numeracy among primary classes, which would fulfill the demands in the upper primary and higher education. Various surveys, especially National achievement survey (NAS) shows that the students are not up to the mark in functional numeracy. Also, the practitioner visited various schools in Dharmapuri District. During the visit the practitioner found that the students who are studying in the primary are struggling in numeracy and applying in daily activities. As they learn the fundamentals by hearting, they find difficult in applying the concepts in learning. So, the practitioner plans to enhance FN among teachers by activity – based method at primary levels. Also, the purpose of the research is to examine the effects of activity – based method by the teachers on problem solving skills and problem posing skills of primary students.

5. Delimitation of the study:

There are 812 primary schools and 10 blocks in the Dharmapuri districts. So, it is hard to cover all the schools and all the blocks in the district. Hence the study is limited to Nallampalli block and particularly PUES ,Avainagar for the present study.

5. The title of the action research study:

“Enhancing Functional numeracy amoung III standard students by activity-based method”.

6. The objective of the action research study:

The study aims:

The study aims:

- To enhance functional numeracy among students in learning mathematics at primary stages.
- To examine the effects of activity – based method by the teachers on problem solving skills and problem posing skills of primary students.

7. The hypothesis of the action research study:

- There is a significant difference between the Pre-test and Post-test of teachers in enhancing functional numeracy among students in learning mathematics at primary stages.
- There is a significant gender difference in enhancing functional numeracy among students in learning mathematics at primary stages.

8. Sample of the action research study:

There are 10 blocks, out of it Nallampalli block selected purposely. There are 118 primary schools in Nallampalli block. So, it's hard to conduct the study in all the schools, in that PUES, Avainagar is chosen purposely for the study.

II. Methodology:

9. Preparation of Questionnaire: A pre-test, post-test questionnaire and worksheet were prepared with the help of the following B.T Assistants and Second grade Assistants:

S.no	Name, Designation and address with phone number.
1.	Mr.I.K. Ramu., M.Sc. B.Ed., B.T Assistants, PUMS, Konangihalli, Nallampalli. 9894580694.
2.	Mrs.G.Poonguzhali, Head mistress, PUPS, Vadakutherukottai, Nallampalli. 9787529001.
3.	Mr.V.Rajesh, S.G.T, PUMS, Konangihalli, Nallampalli. 9443084340.

A pre-test questionnaire consists of 20 multiple choice questions, which covers about:

- Number system
- Measurements
- Time

10. Preparation of Post- test Questionnaire:

A post-test questionnaire consists of 20 multiple choice questions, which differ from pre- test questionnaire were prepared with help of the above said team.

11. Preparation of Worksheets:

10 worksheets were prepared.

11.1 Worksheet 1: It contains 5 questions based on missing numerals.

11.2 Worksheet 2: It contains 5 questions based on writing the number names and completing the facts by addition & subtraction.

11.3 Worksheet 3: It contains 5 questions based on place values for underlined numeral.

11.4 Worksheet 4: It contains 5 questions based on circling odd & even numbers and finding greater than or lesser than or equal by comparison.

11.5 Worksheet 5: It contains 5 questions based on varieties in addition & subtraction of numerals.

11.6 Worksheet 6: It contains 5 questions based on ascending & descending units in length.

11.7 Worksheet 7: It contains 2 questions based on finding the smallest & the greatest for the given numerals.

11.8 Worksheet 8: It contains 2 questions based on calendar.

11.9 Worksheet 9: It contains 7 questions based on drawing the hands for the given time.

11.10 Worksheet 10:It contains 3 questions based on multiplication and pattern.

12. Interventions:

A pre- test was administered for 39students through questionnaire. With the help of pre-test output by the students, the following interventions were enhanced by the following activities through the teacher:

Activity 1: Arranging the numerals in ascending &descending order

- (i) Spell the number: The easiest way to familiarize a child with numbers is to encourage to spell them out randomly. For example fifty-one to hundred- 51 to 100, two hundred fifty oneto three hundred and five– 251 to 305 , and so on. This is a great way to teach them how to count. Begin with given one and count up to stated number. With time, help them understand how a combination of digits makes up one number.
- (ii) Count using fingers: Once the child is comfortable with the order of numbers and their spellings, then they are taught to count using their fingers. Learning to count using fingers is very important for a child. Berteletti and Booth in their study, 'Perceiving fingers in single-digit arithmetic problems, published in Frontiers in Psychology (2015), say, "finger representation and finger-based strategies play an important role in learning and understanding arithmetic."
- (iv) Different numbers were written on pieces of chart paper to make number cards. Shuffled them and askedthe child to arrange the numbers in ascending order and descending order.
Note: worksheets were distributed to the students and asked to work leisurely in the home.

Activity 2: Addition and subtraction

(i) $31 + 7 = \underline{\hspace{2cm}}$	(ii) $28 + 3 = \underline{\hspace{2cm}}$
(iii) $64 + 9 = \underline{\hspace{2cm}}$	(iv) $56 + 4 = \underline{\hspace{2cm}}$
(v) $42 + 9 = \underline{\hspace{2cm}}$	(vi) $15 + 8 = \underline{\hspace{2cm}}$
(vii) $23 + 5 = \underline{\hspace{2cm}}$	(viii) $71 + 3 = \underline{\hspace{2cm}}$
(ix) $40 + 7 = \underline{\hspace{2cm}}$	(x) $83 + 5 = \underline{\hspace{2cm}}$
(xi) $96 + 4 = \underline{\hspace{2cm}}$	(xii) $77 + 6 = \underline{\hspace{2cm}}$
(xiii) $25 + 9 = \underline{\hspace{2cm}}$	(xiv) $57 + 3 = \underline{\hspace{2cm}}$
(xv) $79 + 1 = \underline{\hspace{2cm}}$	(xvi) $19 + 8 = \underline{\hspace{2cm}}$
(xvii) $67 + 7 = \underline{\hspace{2cm}}$	(xviii) $49 + 9 = \underline{\hspace{2cm}}$
(xix) $90 + 8 = \underline{\hspace{2cm}}$	(xx) $35 + 2 = \underline{\hspace{2cm}}$

(i) 34 $+12$ _____ _____	(ii) 16 $+11$ _____ _____	(iii) 27 $+22$ _____ _____
(iv) 52 $+21$ _____ _____	(v) 33 $+44$ _____ _____	(vi) 67 $+40$ _____ _____
(vii) 83 $+71$ _____ _____	(viii) 49 $+23$ _____ _____	(ix) 72 $+15$ _____ _____
(x) 92 $+31$ _____ _____	(xi) 97 $+43$ _____ _____	(xii) 61 $+79$ _____ _____
(xiii) 81 $+69$ _____ _____	(xiv) 74 $+21$ _____ _____	(xv) 32 $+89$ _____ _____

Activity 3: Conversion of measurements into ascending order and descending order.

Students were practised units in measurements by activities.

Step:1 All students were given table and asked read the units and its abbreviation

Units in length	Symbols
Millimetre	mm
Centimetre	cm
Metre	m
Kilometre	km

Units in weight	Symbols
Milligram	mg
Centigram	cg
Gram	g
Kilogram	kg

Step: 2 students were practised ascending and descending order with the following table.

Units in length- ascending order	Units in length- descending order
Millimetre	Kilometre
Centimetre	Metre

Metre	Centimetre
Kilometre	Millimetre

Units in Weight - ascending order	Units in Weight- descending order
Milligram	Kilogram
Centigram	gram
Gram	Centigram
Kilogram	Milligram

Step: 3 All students were given metric conversion tables and asked to practise

Metric conversions
1metre = 100centimetres
1metre = 1000 millimetres
1 Kilometre = 1000 metres
1 gram = 1000 milligrams
1 kilogram = 1000 grams
1 litre = 1000 millilitres

Activity 4: All students were given monthly sheet calendar and are asked read and go through the sheet



- (i) 11th day of the month is _____
- (ii) Number of days ending in zero _____
- (iii) Last day of the month is _____
- (iv) The fourth Friday comes on _____

Activity 5: Prepared 10 worksheets were distributed to students and are asked to do. The students are guided then there by Co- investigator.

12. post-test:

A post - test, which contains 20 multiple choice questions was administered for 25 primary teacher teachers by offline. Pre- test and post – test marks were entered in tabloid and analysis were done

13. Data Analysis:

Table: 1

13.1 Significant improvement in enhancing the knowledge of Teachers.

S .no	students name	Gender M / F	Pre -Test Score	Post -Test Score
1	S.Sasidharan	B	42	90
2	S.Manikandan	B	34	92
3	C. Sridar	B	32	88
4	C.Predesan	B	36	90
5	C. Enaeshkannan	B	40	91
6	M. Pramesh	B	30	90
7	J. Dharsan	B	35	91
8	S. Povizhan	B	36	84
9.	A. Jayanth Adihtya	B	32	86
10	V. Monish	B	34	80
11	E. Mohammed Farug	B	41	89
12	K. Jeeva	B	38	84
13	A. Satheswaran	B	25	86
14	MajobRijabose	B	28	84

15	S. Roshik	B	35	86
16	M. Muralidharan	B	39	88
17	K. Sabari	B	38	82
18	M. Tharun	B	31	86
19	P. Risvanth	B	30	82
20	L. Jevathasree	G	35	84
21	G. Pavithra	G	32	82
22	P. Moonisha	G	20	84
23	V. Priyanka	G	25	86
24	R. Subashini	G	34	88
25	P. Kirthuika	G	36	86
26	A. Anusree	G	37	85
27	V. Subhasree	G	37	89
28	P. Harini	G	34	84
29	H. Shakilaa	G	40	80
30	K. Thamilselvi	G	38	78
31	S. Yuvasree	G	39	79
32	S. Samyukdha	G	33	85
33	V. Kanishka	G	34	84

34	S. Subhasree	G	31	90
35	P. Lokitha	G	34	91
36	S. K. Hemalatha	G	33	90
37	M. P. Catherin jesica	G	34	89
38	S. G. Thejasree	G	38	88
Total			1300	3271

Table:2

13.2 Pre- test and Post-test Average score Analysis.

Test	Average
Pre- test	34.21
Post- test	86.07

From the table-2, it is inferred that the average score of post-test score is greater than post-test score. Hence there is a significant difference between the Pre-test and Post-test of teachers in enhancing functional numeracy among students in learning mathematics at primary stages.

Graph 1: Enhancing functional numeracy among students in learning mathematics at primary stages regarding Pre-test and Post-test scores.

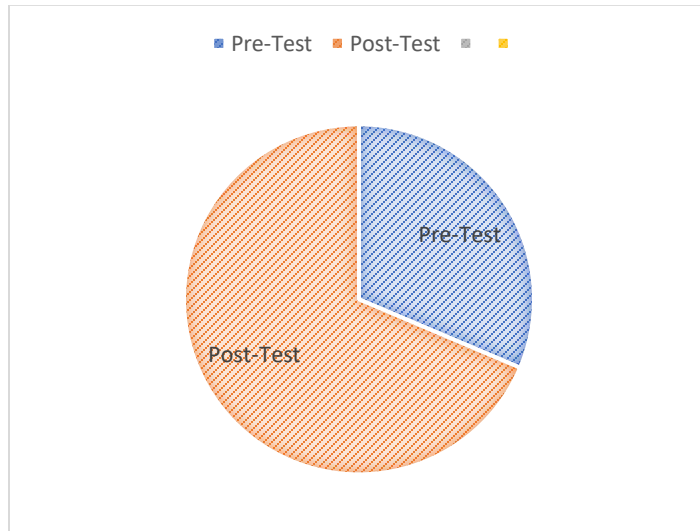


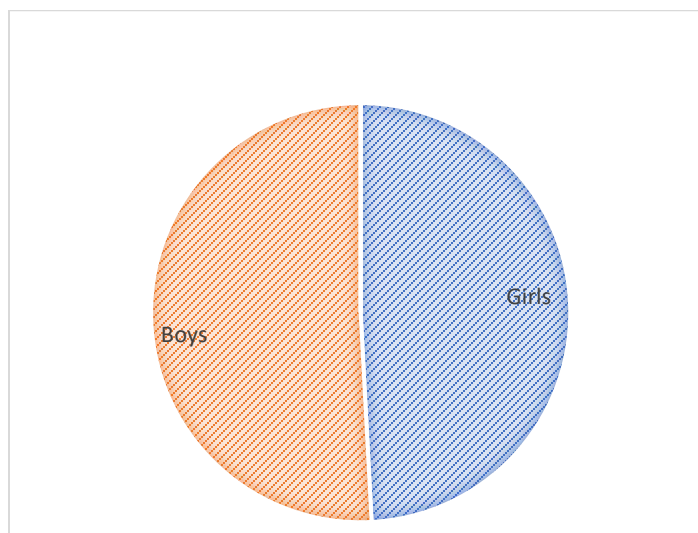
Table:3

13.3 Post-test Average score Analysis between Boys and Girls.

Test	Average
Boys - Post- test	86.78
Girls - Post- test	85.36

From the table-3, it is inferred that the average score of post-test score of boys is greater than post-test score of girls. Hence There is a significant gender difference in enhancing functional numeracy among students in learning mathematics at primary stages.

Graph 2: Enhancing functional numeracy among boys and girls students in learning mathematics at primary stages regarding Post-test scores.



14. Findings:

- There is a significant difference between the Pre-test and Post-test of teachers in enhancing functional numeracy among students in learning mathematics at primary stages.
- There is a significant gender difference in enhancing functional numeracy among students in learning mathematics at primary stages.
- Boys are good than the girls in enhancing functional numeracy among students in learning mathematics at primary stages.
- Boys showed more interest than girls in doing worksheets and participated in doing activities.

15. Recommendations:

- Learning from textbooks is not just enough for some students in few concepts
- Worksheet helps a child think. It also enables a sense of reasoning and helps develop cognitive abilities.
- Math worksheets are an essential part of early educational development.
- Worksheets can be used by teachers to understand students' previous knowledge, learning outcome and the process of learning.
- Worksheets help the students become more engaged with their learning and slowly, help students become more independent.

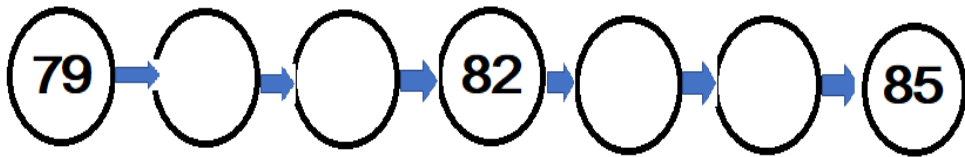
16. Conclusions:

Hence Worksheets can be used by teachers as a tool in enhancing functional numeracy among students in learning mathematics at primary stages.

**District Institute of Education and Training, Settikarai,
Dharmapuri- 636704.**

Pre-test/ Post- test Questionnaire.

Subject: Mathematics.

Q.no	Answer all the Questions	20 x 2= 40
1	<p>Fill in the Blanks</p> 	
2	<p>Complete the given facts by placing “+” for additional “-“ for subtraction.</p> <p>i) $92 \quad \boxed{} \quad 20 = 72$</p> <p>ii) $35 \quad \boxed{} \quad 42 = 77$</p>	
3	<p>Write the number names for the following numerals:</p> <p>(i) 896</p> <p>(ii) 306</p>	
4	<p>Write the place values for the underlined digit in the given number:</p> <p>(i) $\underline{6}78$ (iii) $9\underline{1}8$</p> <p>(ii) $38\underline{0}$ (iv) $52\underline{1}$</p>	

5	Fill the following: (i) 735 = ____ + 30 + ____ (ii) 400 + 0 + 9 =												
6	Complete the following: i) <table><tr><td>98</td><td></td><td>102</td><td></td><td></td><td>108</td></tr></table> ii) <table><tr><td>60</td><td></td><td>72</td><td></td><td>84</td><td></td></tr></table>	98		102			108	60		72		84	
98		102			108								
60		72		84									
7	Circle the even numbers: (i) 642 , 667, 680, 691, 693 (ii) 941, 943, 945, 998, 1000												
8	Circle the odd numbers: (i) 710 , 713, 715 , 717, 720 (ii) 808 , 811 , 814 , 815, 821												
9	Put the appropriate symbols (< , > and =) in the boxes provided i) 205 <table><tr><td></td></tr></table> 305 ii) 614 <table><tr><td></td></tr></table> 613 iii) 878 <table><tr><td></td></tr></table> 878 iv) 431 <table><tr><td></td></tr></table> 034												
10	Add: (i) 921 + 20 + 52 = (ii) 5 + 730 + 25 =												

11

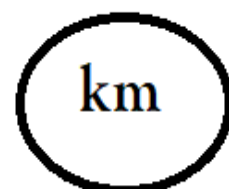
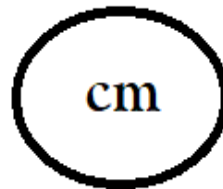
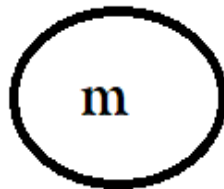
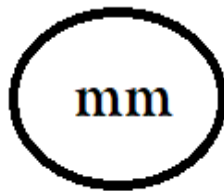
Subtract:

(i) $981 - 165 =$

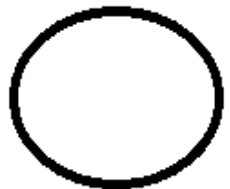
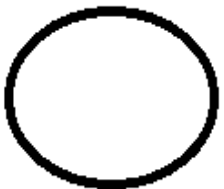
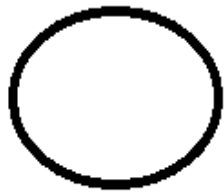
(ii)
$$\begin{array}{r} 5 \quad 1 \quad 8 \\ - 1 \quad 3 \quad 9 \\ \hline \hline \end{array}$$

12

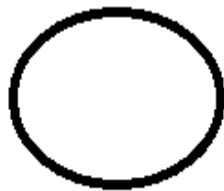
Write the given units in order:



Ascending order :



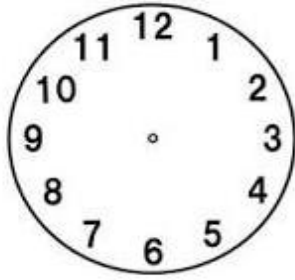
Decending order :



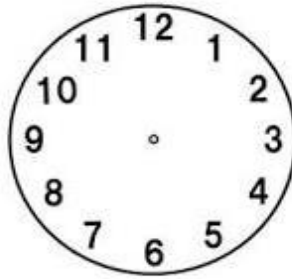
<p>13</p>	<p>Write the number name for the following numeral:</p> <p>(i) 646 --</p> <p>(ii) 308 --</p> <p>(iii) 987 --</p> <p>(iv) 156 --</p>																																																								
<p>14</p>	<p>Using the numbers 9, 0 and 6 only once form the greatest and smallest 3 digit number.</p> <p>Greatest number : _____ Smallest number : _____</p>																																																								
<p>15</p>	<p>Look at the calender and fill in the blank:</p> <table border="1" data-bbox="418 1020 1370 1423"> <tr> <th colspan="7">December 2023</th></tr> <tr> <th>SUN</th><th>MON</th><th>TUE</th><th>WED</th><th>THU</th><th>FRI</th><th>SAT</th></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td>1</td><td>2</td></tr> <tr> <td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr> <td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr> <tr> <td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td></tr> <tr> <td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr> <td>31</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <p>(i) 11th day of the month is _____</p> <p>(ii) Number of days ending in zero _____</p> <p>(iii) Last day of the month is _____</p> <p>(iv) The fourth Friday comes on _____</p>	December 2023							SUN	MON	TUE	WED	THU	FRI	SAT						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
December 2023																																																									
SUN	MON	TUE	WED	THU	FRI	SAT																																																			
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10	11	12	13	14	15	16																																																			
17	18	19	20	21	22	23																																																			
24	25	26	27	28	29	30																																																			
31																																																									

16

Draw the hands in the following clocks to show the given time:



1'0 clock



12'0 clock

17

Fill the Boxes:

(i) $5 \times 3 =$

(ii) $9 \times$ $= 27$

(iii) $10 \times$ $= 30$

(iv) $\times 3 = 18$

18

Continue the patterns :

(i) $- = \equiv - =$

(ii) B D F H

19

Circle the odd one out :

(i) 50g , 1 kg , 2 kg 50g , 3 m

(ii) 10 cm, 5 m , 500g , 5m 50 cm

20

Fill the following:

X	1	2	3	4	5	6	7	8	9	10
2		4				12				
3	3				15					

Annexure – 2

Enhancing Functional Numeracy among III Standard Students by Activity-Based Method.

Work sheets

District Institute of Education and Training, Settikarai,

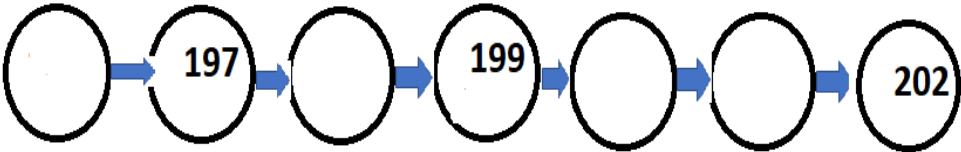
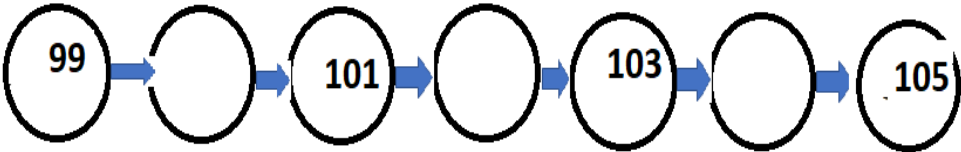
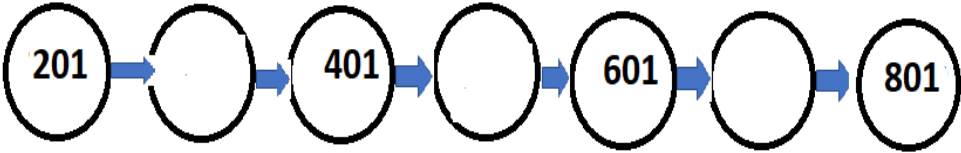
Dharmapuri- 636704.

Action Research- 2022

Worksheet - 1.

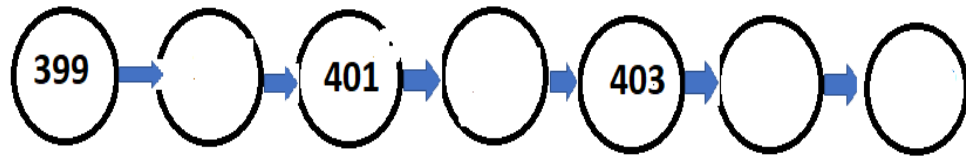
Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions 20 x 2= 40
1	<p>Fill in the Blanks</p> 
2.	<p>Fill in the Blanks</p> 
3.	<p>Fill in the Blanks</p> 

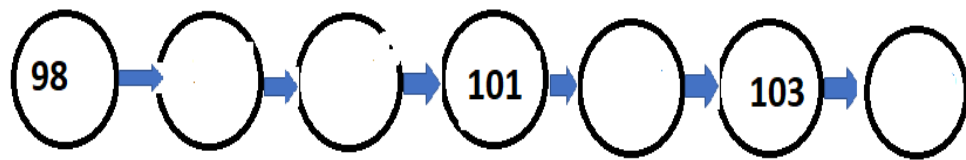
4.

Fill in the Blanks



5.

Fill in the Blanks



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Worksheet - 2.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	<p data-bbox="321 730 1328 762">Complete the given facts by placing “+” for additional “-“ for subtraction.</p> <p data-bbox="360 814 896 888">i) $132 \boxed{} 24 = 156$</p> <p data-bbox="360 982 896 1056">ii) $132 \boxed{} 22 = 110$</p>
2.	<p data-bbox="321 1176 1328 1207">Complete the given facts by placing “+” for additional “-“ for subtraction.</p> <p data-bbox="360 1260 863 1333">i) $98 \boxed{} 16 = 82$</p> <p data-bbox="360 1428 896 1501">ii) $293 \boxed{} 17 = 176$</p>
3.	<p data-bbox="321 1549 1036 1581">Write the number names for the following numerals:</p> <p data-bbox="370 1612 522 1654">(iii) 704</p> <p data-bbox="370 1707 522 1749">(iv) 586</p>

4.	Write the number names for the following numerals: (i) 708 (ii) 974
5.	Write the number names for the following numerals: (i) 973 (ii) 248

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Worksheet- 3

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	<p>Write the place values for the underlined digit in the given number:</p> <p>(iii) <u>5</u>78 (iii) 9 <u>0</u>8</p> <p>(iv) 38<u>1</u> (iv) 42<u>9</u></p>
2	<p>Fill the following:</p> <p>(iii) 235 = ____ + 30 + ____</p> <p>(iv) 600 + 10 + 9 =</p>
3	<p>Write the place values for the underlined digit in the given number:</p> <p>(i) <u>1</u>78 (iii) 5 <u>7</u>8</p> <p>(ii) 48<u>2</u> (iv) 6 <u>1</u>7</p>
4	<p>Write the place values for the underlined digit in the given number:</p> <p>(iii) <u>6</u>08 (iii) 2 <u>1</u>8</p> <p>(iv) 58<u>0</u> (iv) 31<u>1</u></p>
5	<p>Fill the following:</p> <p>(v) 205 = ____ + 0 + ____</p> <p>(vi) 100 + 0 + 2 =</p>

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Worksheet - 4.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	Circle the even numbers: (ii) 442 , 167, 680, 291, 183 (ii) 541, 545, 646, 798, 1000
2.	Put the appropriate symbols (< , > and =) in the boxes provided i) 198 <input type="text"/> 178 ii) 614 <input type="text"/> 613 iii) 213 <input type="text"/> 213 iv) 431 <input type="text"/> 034
3.	Circle the odd numbers: (ii) 810 , 719, 615 , 513, 120 (ii) 768 , 731 , 604 , 325, 421
4.	Circle the even numbers: (i) 540 , 567, 580, 591, 593 (ii) 741, 743, 747, 798, 900
5.	Put the appropriate symbols (< , > and =) in the boxes provided i) 721 <input type="text"/> 521 ii) 514 <input type="text"/> 413 iii) 079 <input type="text"/> 249 iv) 329 <input type="text"/> 329

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Worksheet - 5.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	Add: (ii) $821 + 35 + 42 =$ (ii) $7 + 630 + 37 =$
2.	Subtract: (iii) $581 - 285 =$ (iv) $\begin{array}{r} 9 \quad 2 \quad 7 \\ - 5 \quad 3 \quad 8 \\ \hline \\ \hline \end{array}$
3.	Write the number names for the following numerals: (v) 514 (vi) 767
4.	Subtract:

	<p>(i) $781 - 179 =$</p> <p>(ii) $\begin{array}{r} 804 \\ - 489 \\ \hline \\ \hline \end{array}$</p>
5.	<p>Write the number names for the following numerals:</p> <p>(iii) 973</p> <p>(iv) 248</p>

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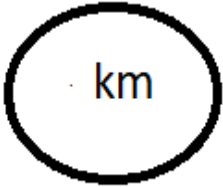
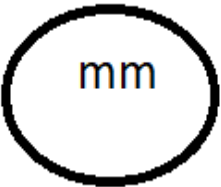
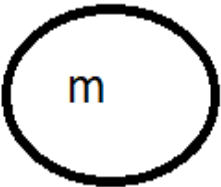
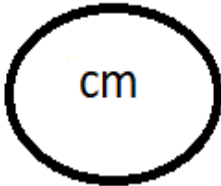
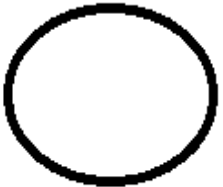
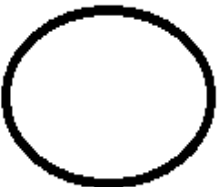

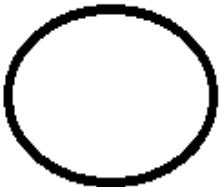
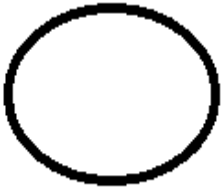
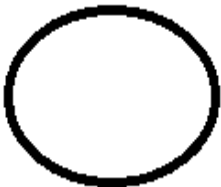
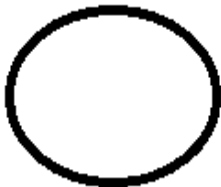
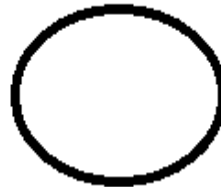
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Worksheet - 6.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	<p data-bbox="313 653 760 688">Write the given units in order:</p> <div data-bbox="337 741 557 926">km</div> <div data-bbox="602 751 821 936">mm</div> <div data-bbox="865 751 1084 936">m</div> <div data-bbox="1130 758 1349 942">cm</div> <p data-bbox="313 999 578 1035">Ascending order :</p> <div data-bbox="337 1058 557 1243"></div> <div data-bbox="597 1068 816 1253"></div> <div data-bbox="857 1068 1076 1253"></div> <div data-bbox="1117 1075 1336 1260"></div> <p data-bbox="313 1314 578 1350">Decending order :</p> <div data-bbox="337 1373 557 1558"></div> <div data-bbox="597 1383 816 1568"></div> <div data-bbox="857 1383 1076 1568"></div> <div data-bbox="1117 1390 1336 1575"></div>

2.

Write the given units in order:

mm

m

cm

km

Ascending order :

Decending order :

Write the given units in order:

m

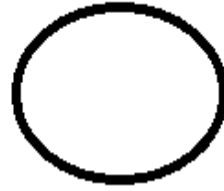
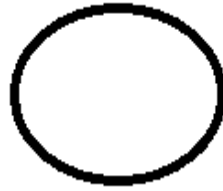
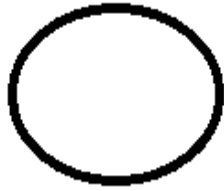
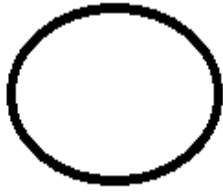
cm

Km

mm

Ascending order :

	<p>Decending order :</p>
--	--------------------------



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Worksheet - 7.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	Using the numbers 8, 0 and 5 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
2.	Using the numbers 0, 4 and 2 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
3	Using the numbers 9, 0 and 6 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
4	Using the numbers 9, 0 and 6 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____

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Worksheet - 7.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	Using the numbers 8, 0 and 5 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
2.	Using the numbers 0, 4 and 2 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
3	Using the numbers 9, 0 and 6 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____
4	Using the numbers 9, 0 and 6 only once form the greatest and smallest 3 digit number. Greatest number : _____ Smallest number : _____

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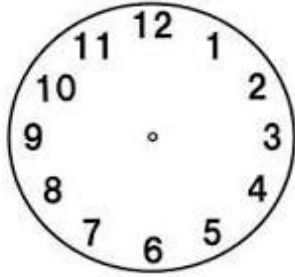
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Worksheet - 9.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	<p data-bbox="313 653 1255 688">Draw the hands in the following clocks to show the given time:</p> <div data-bbox="363 741 654 1014"></div> <p data-bbox="383 1056 646 1115">10 'o clock</p> <div data-bbox="808 751 1099 1024"></div> <p data-bbox="870 1056 1127 1115">12' o clock</p>
2.	<p data-bbox="313 1163 1255 1199">Draw the hands in the following clocks to show the given time:</p> <div data-bbox="363 1251 654 1524"></div> <p data-bbox="422 1566 646 1625">1'o clock</p> <div data-bbox="808 1262 1099 1535"></div> <p data-bbox="880 1566 1127 1625">11' o clock</p>
3	<p data-bbox="313 1747 1255 1782">Draw the hands in the following clocks to show the given time:</p>



6'o clock



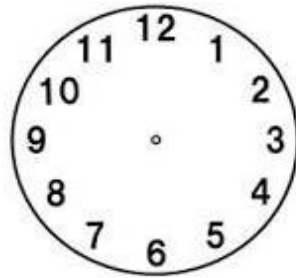
12' o clock

4

Draw the hands in the following clocks to show the given time:



4'o clock



7' o clock

5

Draw the hands in the following clocks to show the given time:



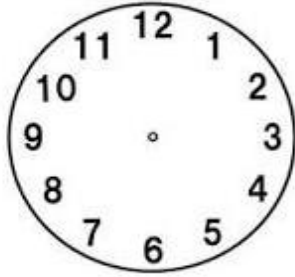
1'o clock



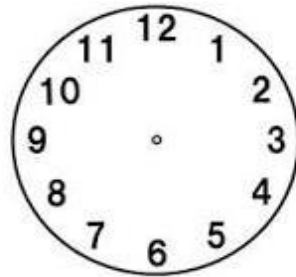
12' o clock

6

Draw the hands in the following clocks to show the given time:



1'o clock



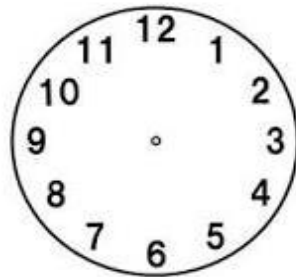
12' o clock

7

Draw the hands in the following clocks to show the given time:



3'o clock



9' o clock

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Worksheet - 10.

Class:III Std

Subject: Mathematics.

Q.no	Answer all the Questions
1	<p>Fill the Boxes:</p> <p>(i) $6 \times 3 =$ <input data-bbox="647 751 807 831" type="text"/></p> <p>(ii) $9 \times$ <input data-bbox="542 871 643 951" type="text"/> $= 27$</p> <p>(iii) $10 \times$ <input data-bbox="574 991 675 1071" type="text"/> $= 30$</p> <p>(iv) <input data-bbox="444 1110 545 1190" type="text"/> $\times 2 = 18$</p>
	Fill the Boxes:

	<p>(i) $8 \times 3 = \boxed{}$</p> <p>(ii) $9 \times \boxed{} = 27$</p> <p>(iii) $10 \times \boxed{} = 20$</p> <p>(iv) $\boxed{} \times 3 = 18$</p>
2.	<p>Continue the patterns :</p> <p>(iii) $- = \equiv - =$</p> <p>(iv) XZBD</p>
3	<p>Continue the patterns :</p> <p>(i) $- = \equiv - =$</p> <p>(ii) LNPR</p>

Photo album.







