

SKILLING UP FOR THE FUTURE:

"Empowering Young Minds: Innovative teaching methods Overcoming Mathematics Phobia in Children"

**How Square Grid Notebook And Online Resources Are
Transforming Teaching And Learning .**

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Introduction :

Many students (around 60-70%) find math hard.

The way we teach math now isn't helping them learn. It just throws formulas and rules at them without explaining why they work. This makes things confusing and doesn't help students really understand math.

Solving long, complicated problems isn't a good way to learn either. It's just frustrating and doesn't make math enjoyable.

The way we're teaching math now isn't working. We need to change things up and make math more fun, clear, and connected to the real world

Many students lost required knowledge for higher education and lack of practices from previous classes **due to covid** for them made a book to recover .

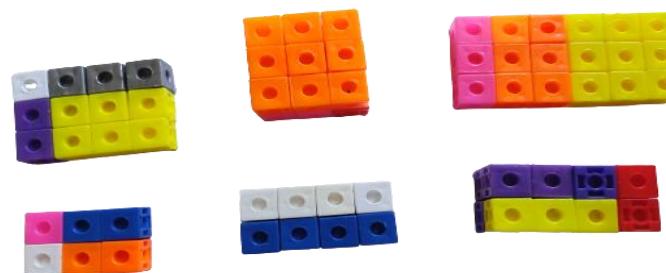
Multipurpose Tool Are :

Creating a vision of how to use one tool for many concepts .

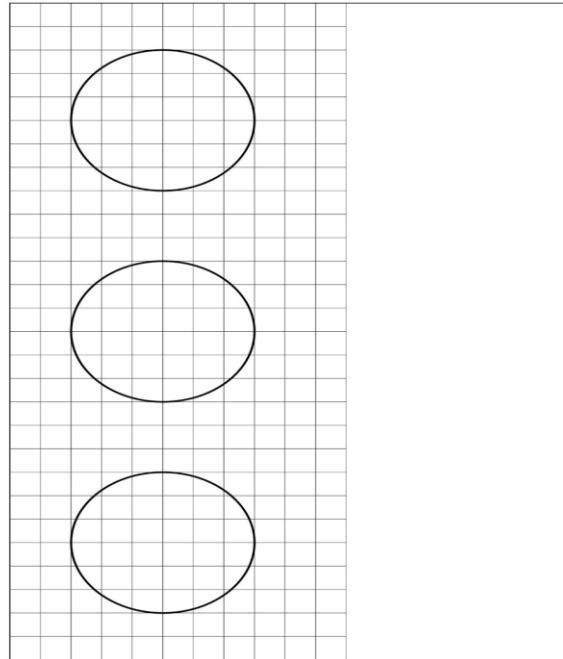
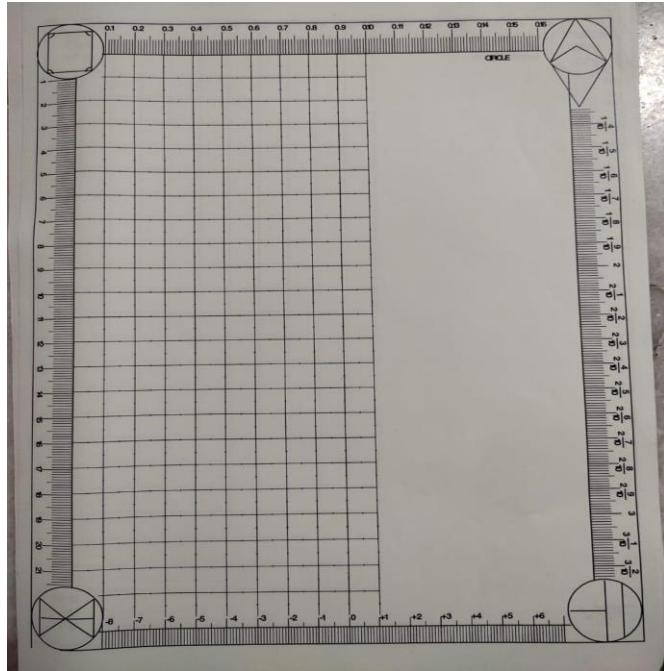
1. Square grid .
2. Cubes .
3. Parallel & comparison teaching .
4. Geoboard square & circle .

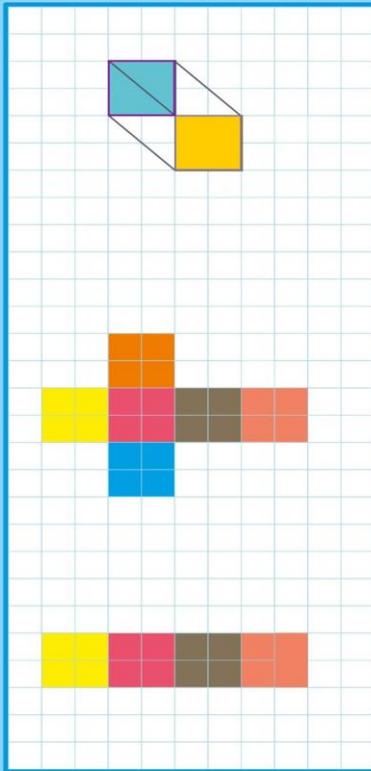
Need a proper vision and training to teach by taking one model

Cubes Few Example :

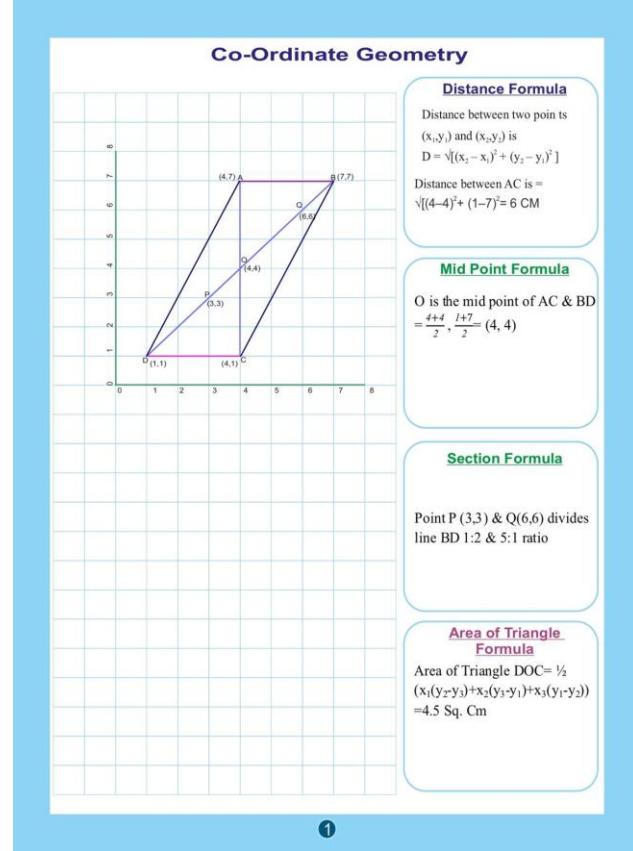


Square Grid:





②



①

Like Fraction Addition

$\frac{1}{5}$

$\frac{2}{5}$

$\frac{3}{5}$

Like Decimal Addition

$0.31 + 0.33 = 0.64$

Unlike Fraction Addition

Adding Fractions

$\frac{1}{4} + \frac{2}{3} = \frac{3}{12} + \frac{8}{12} = \frac{11}{12}$

Unlike Decimal Addition

$0.6 + 0.13 = 0.73$

Unlike Fraction Subtraction

$\frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$

Like Decimal Subtractions

$0.64 - 0.31 = 0.33$

NUMBER SYSTEM :

FRACTION

FRACTION NUMBER LINES 0 TO 1

DECIMAL

Whole number and INTEGER

Multiplication on Number Line

$2 \times 5 = 10$

Subtraction on Number Line

$5 - 3 = 2$

Division on a Number Line with Remainders

$12 \div 3 = 4$

Equivalent Fractions on Number Line

Integers on a Number Line

Plotting Fractions on Number Line

Decimal Representation On Number Line

Number Line Model

Fractions

Decimals

Addition Rules for Integers

Example A: $(+100) + (+2)$ (Start at 0, move 100 steps right, then 2 more steps right.)

Count how many steps you took.

Example B: $(-100) + (-2)$ (Start at 0, move 100 steps left, then 2 more steps left.)

Answer: The sign is +, because you took + steps.

Answer: $(+5)$ The sign is +, because you took + steps.

Benefits of working squared book , cube and writing way :

1. Easy to understand the concept.
2. Easy to find mistakes.
3. Easy to write and use.
4. Easy to measure, direct measure, different scale.
5. Easy to draw the figure.
6. The joy of knowing the value of a problem.
7. Recall and remember easily.
8. Increase interest and focus towards learning .

Writing Skills :

| Given : Direct Value | Indirect Value |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ചുരുക്കായാൽ തീരുമ്പി = $h = 2\text{cm}$ ചുരുക്കായാൽ തീരുമ്പി = $\frac{3}{2}\text{cm}$ രിംഗംഡേൽ തീരുമ്പി = $h = 12 - 4 = 8\text{cm}$ രിംഗംഡേൽ വലുത് = 3cm | രിംഗംഡേൽ തീരുമ്പി = $\frac{3}{2}\text{cm}$ |
| Figure : | ജോഗിൽ ഒരു ചുരുക്കായാൽ തീരുമ്പിയും ഒരു ചുരുക്കായാൽ തീരുമ്പിയും ഒരു രിംഗംഡേൽ തീരുമ്പിയും ഒരു ചുരുക്കായാൽ തീരുമ്പിയും ഒരു ചുരുക്കായാൽ തീരുമ്പിയും ഒരു ചുരുക്കായാൽ തീരുമ്പിയും |
| $\text{S1: } \pi r^2 \left[\frac{2}{3}h_1 + h_2 \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \left[\frac{2}{3} \times 2 + 8 \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \left[\frac{4}{3} + 8 \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \left[\frac{4+24}{3} \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \left[\frac{28}{3} \right]$ | $\text{S2: } \Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \times \frac{4}{2} \times \frac{28}{3}$ $\Rightarrow 22 \times 3$ $\Rightarrow 66\text{cm}^2$ |
| Ans: 66cm^2 | |

| Given : Direct Value | Indirect Value |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| രിംഗംഡേൽ തീരുമ്പി = $r = 60\text{cm}$ ചുരുക്കായാൽ തീരുമ്പി = $h = 120\text{cm} = h_1$ | $60\text{cm} = \frac{60}{100} = \frac{6}{10} = \frac{3}{5}\text{m}$ $120\text{cm} = \frac{120}{100} = \frac{12}{10} = \frac{6}{5}\text{m}$ $120\text{cm} = \frac{120}{100} = \frac{12}{10} = \frac{6}{5}\text{m}$ |
| ചുരുക്കായാൽ തീരുമ്പി = $r = 60\text{cm}$ ചുരുക്കായാൽ തീരുമ്പി = h_2 അക്കേഡിലുള്ള തീരുമ്പി = 60cm | Figure: |
| | $\log \text{ic}^2$ $\text{rി.എ} = [2, 3, 4, 5, 6]$ $\pi r^2 h = \left[\frac{1}{3} \pi r^2 h + \frac{2}{3} \pi r^2 \right]$ $\pi r^2 h = \left[\frac{1}{3} \pi r^2 (h + 2r) \right]$ $\pi r^2 \left[h_1 - \frac{h_2}{3} + 2r \right]$ $\pi r^2 \left[h_1 - \frac{1}{3} (2r + h_2) \right]$ |
| | $\text{1: } \Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \left(\frac{9}{5} - \frac{1}{3} \left(\frac{6}{5} + \frac{6}{5} \right) \right)$ $\Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \left[\frac{9}{5} - \frac{1}{3} \left(\frac{12}{5} \right) \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \left[\frac{9}{5} - \frac{+12}{15} \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \left[\frac{9-4}{5} \right]$ $\Rightarrow \frac{22}{7} \times \frac{3}{5} \times \frac{3}{5} \left(\frac{5}{5} \right)$ $\Rightarrow \frac{198}{175} \times 1$ $\Rightarrow \frac{198}{175}$ |
| | Ans: 1.131m^3 |

Short Way :

| ಕ್ರಿಂಪನ ಪ್ರಮೇಯ | |
|-------------------------------------------------------------------|--|
| ಎಲ್.ಎ' | |
| $AT_1 = \frac{1}{2} \times a \times h$ | |
| $AT_2 = \frac{1}{2} \times b \times h$ | |
| $\frac{AT_1}{AT_2} = \frac{a}{b} \rightarrow \textcircled{1}$ | |
| $AT_1 = \frac{1}{2} \times a \times h$ | |
| $AT_2 = \frac{1}{2} \times c \times h$ | |
| $\frac{AT_1}{AT_2} = \frac{c}{d} \rightarrow \textcircled{2}$ | |
| Compare $\textcircled{1}$, $\textcircled{2}$ & $\textcircled{3}$ | |
| $\frac{AT_1}{AT_2} = \frac{a}{b}$ | |
| $\frac{AT_1}{AT_3} = \frac{c}{d}$ | |
| $\therefore \frac{a}{b} = \frac{c}{d}$ | |

| ಕ್ರಿಂಪರ್ವತ ಪ್ರಮೇಯ | |
|----------------------------------------------------|--|
| ಎಲ್.ಎ' | |
| $\frac{a_1}{c_1} = \frac{c}{a}$ (ಎ.ಎ.ಎ.ಈ. 1) | |
| $a^2 = c c_1 \rightarrow \textcircled{1}$ | |
| base :- $\frac{b}{c_2} = \frac{c}{b}$ (ಎ.ಎ.ಎ.ಈ. 2) | |
| $b^2 = c c_2 \rightarrow \textcircled{2}$ | |
| add $\textcircled{1} + \textcircled{2}$ | |
| $a^2 + b^2 = c c_1 + c c_2$ | |
| $a^2 + b^2 = c [c_1 + c_2]$ | |
| $a^2 + b^2 = c \times c$ | |

Our Products And Services Are:

| No. | Services |
|-----|-------------------------------------------------------------------------------|
| | Bridges Course Book |
| 2. | Squared Grid Notebook. |
| 3. | All In One Book Math With Practical Approach (Recovery Of Lost Knowledge) |
| 4. | Activity Book |
| 5. | SSLC Exam Preparation Chapterwise. |
| 6. | Teachers Training Using Square Grid & Activity Based Learning. |
| 7. | Online resource collection For teachers & students |

Reached out:

| No. of School | No. of students | No. teachers |
|----------------------|-----------------|--------------|
| 15 in bidar district | 2000 | 100 |
| 20 in Kalaburgi | 1000 | 40 |
| 35 school | 3000 | 150 |

Future Goals :

Improve learning ability and gaining interest in maths subjects.

1. Spreading innovative teaching of math in our area .
2. Conducting teachers training & students at school level.
3. Conducting math exhibition taluk level for teachers & students to show all in one platform.



CHANDRAKANT PATIL PUBLIC SCHOOL

Recognised by Govt. of Karnataka

Tilak Nagar, Kusnoor Road, Kalaburagi - 585 105 - Karnataka
Ph. 08472 - 245934 - E-mail : principalcpps@gmail.com

To,
The Commissioner,
Department of Education
Kalaburagi.

Date: 18/01/2020

Subject:- Attempt to get rid of Math Phobia – Reg.

Respected sir,

Mr. Mallikarjun Bangargi conducted a Mathematics workshop for nearly 100 plus slow learners of our three schools, namely :

- Chandrakant Patil Public School, Tilak Nagar, Kusnoor Road.
- Amit Patil Central School, Kapnoor Industrial Area.
- Chandrakant Patil Central School, Karuneshwar Nagar.

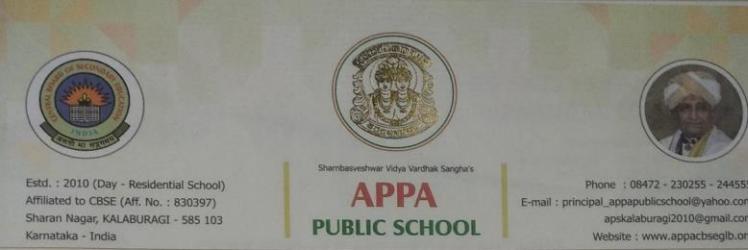
It was found that, his approach of teaching Mathematics concepts was much more easier and innovative which created interest among the children in learning the concepts in a joy full way.

The note books which were used helped the pupils to understand the topic with strong basic skill involved in it.

The 3 Principals and 20 Teachers also attended the workshop and expressed their opinion that Mr. Mallikarjun's ideology of teaching Mathematics in play way method was extremely appreciable.

His ambition of removing Math Phobia from the minds of the budding students of "Kalyana Karnataka" is praise worthy. Wishing him all the very best to achieve his ambition,

Handwritten signature
PRINCIPAL
Chandrakant Patil Public School
Tilak Nagar, Kusnoor road,
KALABURAGI.



Estd. : 2010 (Day - Residential School)
Affiliated to CBSE (Aff. No. : 830397)
Sharan Nagar, KALABURAGI - 585 103
Karnataka - India

To Whomsoever Concerned

Letter of Appreciation

This is to certify that the Workshop on Math was conducted by Mr. Mallikarjun Bangargi, (M.Tech.) of Chiguru - Helping Hands Organization, Kalaburagi on 28-01-2020 for 30 students of Class VIII and 4 staff at our institution.

The workshop provided insights into the basic concepts of Math, which was more helpful to the slow-learners, especially, the concept of square grid visualization that makes it easily intelligible to students. It reinforced the basic concepts of Math, which are quite essential towards the consolidation of the subject from the application perspective.

We appreciate the pain-staking effort of the Resource person Mr. Mallikarjun, who conducted the workshop with a missionary zeal.

Place: Kalaburagi
Date: 04-02-2020



Handwritten signature
Principal
PRINCIPAL
Appa Public School
Affiliated to CBSE, New Delhi No. 830397
Sharan Nagar, KALABURAGI - 03.

Online Free Resource Are:

Creating Playlist And Collecting Free Resource From Best Creator

1. Youtube Collecting And Share Publicly.
2. All Social Media Like Facebook, Pinterest.
3. Google App And Its Uses (Collection, Site, Bard)
4. Chatgpt (Digital Contents Share Publicly)
5. Geogebra (Creating Book Share Publicly)
6. Collecting Useful Website.

Conclusion

One significant concern that we have identified is the prevalent mathematics phobia among budding children. **Recognizing the importance of mathematics in academic and cognitive development, we propose a collaborative initiative with the Department of Public Education to address and alleviate this phobia.**

Our proposal includes **organizing workshops, interactive sessions, and resource development to make mathematics more engaging and accessible for students.** We believe that by fostering a positive learning environment and employing innovative teaching methods, we can significantly reduce anxiety related to mathematics.

Our aim is to **work together** to ensure that every child in Kalaburgi can approach mathematics with confidence and enthusiasm.

Thank you for considering our proposal. We look forward to the possibility of making a positive impact on the education landscape in our community.