

BEST PRACTICES

KV NO.2 KORBA (CG)-(26-27)

1. Title of the Best Practice

Prime Number Express: An Experiential and Activity-Based Approach to Master Prime and Composite Numbers.

2. Kendriya Vidyalaya

- **Name of KV:** Kendriya Vidyalaya No. 2 NTPC Korba
- **Region:** Raipur Region

3. Name and Designation of the Contributor(s)

- **Name:** Pooja Sahu
- **Designation:** TGT (Mathematics)

4. Target Group

- **Class(es):** Class 6th
- **Subject(s):** Mathematics
- **Number of students benefited:** 43

5. Theme/Area (As per NEP 2020)

- Experiential and Activity-Based Learning.
- Shift from Rote Memorization to Conceptual Clarity.

6. Context/Need

- **The Challenge:** Students frequently struggle to clearly differentiate between prime and composite numbers, often memorizing definitions mechanically without a true understanding of factors.
- **The Need:** A hands-on, engaging pedagogical tool was essential to visually map out numbers, spark group collaboration, and make historical tools like the Sieve of Eratosthenes simple to understand.

7. Description of the Practice

Objectives:

- To enable 100% of the class to accurately identify prime numbers up to 100..

- To foster collaboration and creative group work through visual charting and model building.
- To establish a concrete understanding that prime numbers possess exactly two distinct factors.

Implementation Process (Step-wise):

- **Step 1 (Introduction):** The concept of factors was introduced. Students reviewed the foundational definition of prime numbers.
- **Step 2 (The Design Phase):** The class was divided into working groups. Students collaboratively designed 'The Prime Express' train chart, where each connected compartment carried a specific prime number engine code (2, 3, 5, 7, 11, etc.).
- **Step 3 (Historical Integration):** Students researched and integrated a historical anchor into their charts—featuring the profile and legacy of the Greek mathematician Eratosthenes.
- **Step 4 (Interactive Drills):** An interactive 'Fill-the-Cloud' board activity was executed. Students actively mapped missing numerical figures into cloud cutouts on a vibrant, color-coded display board to solidify retention.

Resources/Materials Used: Chart papers, sketch pens, color-coded cutouts, adhesives, and printed portrait graphics of historical mathematicians.

Duration/Frequency: Conducted over 3 active academic periods (approx. 120 minutes total).

8. Innovation

- **What makes this practice different:** Instead of abstract calculations, numbers were personified through 'The Prime Express' train theme.
- **Visual Kinesthetic Integration:** Combining historical storytelling (Eratosthenes) with physical crafting (cloud-matching cutouts) turned an abstract concept into an engaging, multi-sensory classroom exhibit.

9. Outcomes/Impact

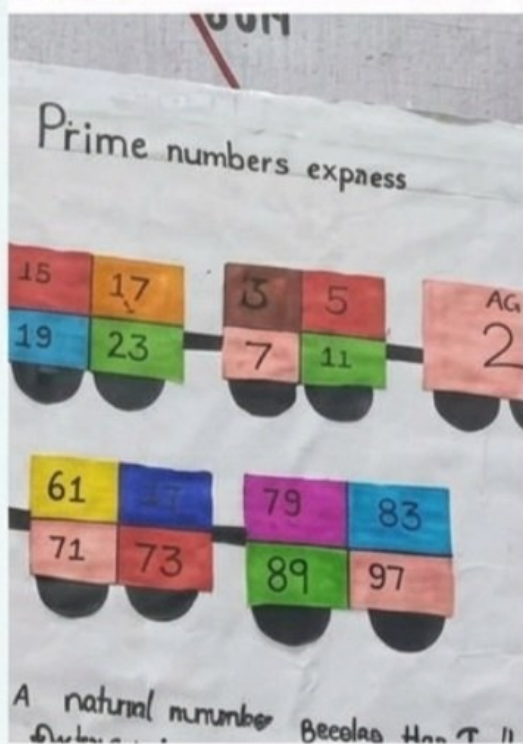
- **Evidence of Improvement:** Peer-to-peer collaboration saw a massive boost during group chart creation. Students who usually stayed quiet actively participated in pasting and ordering numerical sequences.
- **Quantitative/Qualitative Evidence:** Post-activity evaluation metrics showed that 93% of the students (40 out of 43) could accurately identify and write all prime numbers up to 50 without error, a significant leap from the 55% baseline recorded prior to the activity.

10. Scalability and Replicability

How other KVs can adopt this practice: This activity requires zero expensive infrastructure. It uses basic, affordable stationery and can easily be replicated across other Kendriya Vidyalayas. The 'Express Train' framework can also be adapted for other mathematical topics like Factors & Multiples Express, Fraction Junction, or Integer Tracks.

11. Supporting Documents & photographs:

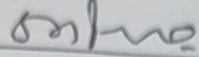




- **Attached Documents:** Detailed Lesson Plan (Annexure-A), student worksheets, and post-activity analytical grading records.

12. Certification

The Principal of the Kendriya Vidyalaya certifies that the practice has been implemented in the school and the information furnished is authentic.

Signature of the Principal: 

School Seal: प्राचार्य / PRINCIPAL,

Date: 16/6/26 कन्द्रीय विद्यालय, एन.टी.पी.सी.
ENDRIYA VIDYALAYA, N.T.P.C
जयन्तीपाली, कोरबा (छ. ग.) 495 450
JAMNIPALI, KORBA (C. G.) 495 450

ANNEXURE - A: DETAILED LESSON PLAN

Name of Teacher: Pooja Sahu

Designation: TGT (Mathematics)

School Name: Kendriya Vidyalaya No. 2 NTPC Korba

Class: 6th

Roll Strength: 43 Students

Topic: Playing with Numbers (Prime and Composite Numbers)

Duration: 40 Minutes

Time & Stage	Lesson Stage	Teacher's Activity	Student's Activity	Evaluation / Teaching Aids
5 Min Stage 1	Introduction & Gaining Attention	Asks students to find factors of numbers 4, 6, and 7 on the chalkboard. Introduces the core definition of Prime Numbers based on findings.	Actively calculate factors on rough sheets. Observe that 7 has only two factors (1 and 7) while others have more.	Chalkboard, Oral student responses.
15 Min Stage 2	Presentation & Concept Building	Explains the concept of Eratosthenes' Sieve. Introduces 'The Prime Express' project concept. Guides students on how prime numbers only move forward with exactly 2 factors.	Listen attentively, note down historical facts about Eratosthenes in notebooks, and map out the concept of train compartments.	Historical Mathematician Chart, Diagram of Train Engine.
15 Min Stage 3	Experiential Learning Activity	Distributes chart items and color cutouts. Coordinates collaborative group work for constructing 'The Prime Express' train poster and populating the pink	Work enthusiastically in designated peer groups. Organize and paste train compartments in numerical sequence. Insert correct cloud-cutouts into the	Active Classroom Participation (Photo 1 & Photo 2 Proof)

		'Prime Numbers' Cloud Matrix Board.	board matrix.	
5 Min Stage 4	Recapitulation & Assessment	Distributes a quick 3-question evaluation worksheet to write all prime numbers between 1 to 50 evaluate classroom absorption levels.	Solve the assessment worksheet individually and submit it for real- time grading.	Written Assessment Worksheet Check.
