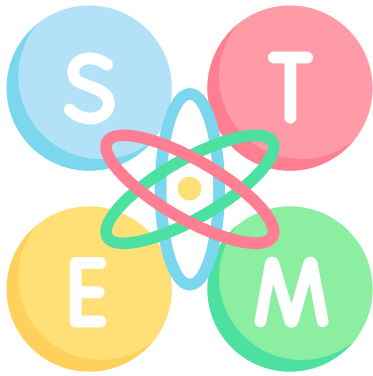


SEPTEMBER 2025 | VOL.1 (INTRODUCTORY ISSUE)

# ÷ SPARK

Small SPARK Big DISCOVERY

STEM Newsletter of PM SHRI KV CRPF NAGPUR



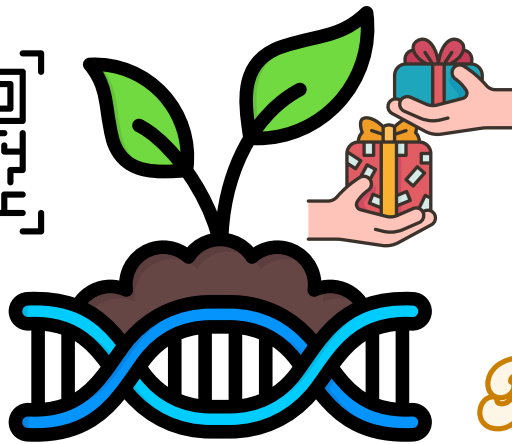
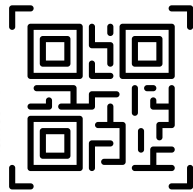
TECHNOTHLON

MANAK



PRAYAAS

NEP 2020

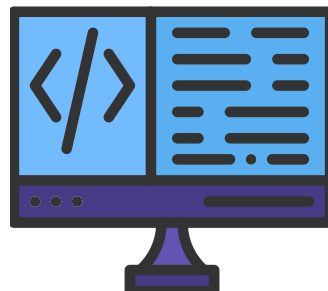


Mega Tinkering Day

</HACKATHON>



WWGC  
IOQM



पीएम श्री केन्द्रीय विद्यालय सीआरपीएफ नागपुर

PM SHRI KV CRPF NAGPUR



# Ample Opportunities

## Waiting outside for new Discoveries

The monthly newsletter of the STEM Activities of The Vidyalaya



### STEM WEEK ACTIVITIES JULY - 2025



### WHAT'S INSIDE FOR YOU :

- Best Practice
- Inspiring Personality
- Stem Activities
- Competitions
- LETS Do
- Brain Sparks

### Contributors : STEM Committee

#### Principal's messages :

Our Vidyalaya has always aimed at igniting curiosity and nurturing innovation among students. This newsletter is a reflection of their creativity and scientific spirit. May it inspire all to learn, explore, and excel.

Anil Gholpe



#### Vice Principal's message :

Dear students, always develop the habit of thinking out of the box. Every challenge is an opportunity to innovate. Let this newsletter encourage you to question, imagine, and create.

Amir Husain



Intellectual Property Rights :

PM SHRI KV CRPF NAGPUR



# BEST PRACTICE INITIATED BY PM SHRI KV CRPF NAGPUR

At PM SHRI KV CRPF Nagpur, every GUEST receives not just a token, but a living gift. Since June 2025, this green practice has added life to our celebration. The idea took shape with the creativity of Mrs. Archana Mishra (TGT-Art), who beautifully wraps the Seed Balls, and the expertise of Mrs. Harsha Nikose (TGT-Science), who prepares them with her deep knowledge of soil. Together, we spread LOVE, CARE, and GREENERY through every GIFT.



## Why Not Gift a SEED BALL?



*From Hand to Land  
A Greener gift  
for cleaner earth.*

### STEM POP-UP: Seed Balls

#### What are Seed Balls?

Small balls made of clay, compost, and seeds, designed to grow plants easily.

#### Why use them?

- Protects seeds from birds and insects.
- Easy to sow – just throw them on soil!

#### STEM Connection:

Making seed balls teaches students about soil science, seed germination and eco-friendly innovations

A simple activity, a big step towards greener future!



Harsha Nikose, TGT (Sci)



Archana Mishra, TGT (AE)

# Shubhanshu Shukla – Carrying India's Pride beyond the stars.”



## A Career in Space Science



### Strong Foundation

Start with physics, mathematics, and computer science. Higher studies (Master's/PhD) and internships build research skills



### Skills to Develop

Technical: Programming, data analysis, engineering  
Soft: Teamwork, critical thinking



### Career Opportunities

Fields include aerospace engineering, astrophysics, weather forecasting, and telecommunications



### Where to Begin

Internships/fellowships with ISRO, NASA, SpaceX, and private companies



### Rewarding Journey

Though challenging, with passion and dedication, students can play a role in humanity's mission to explore the cosmos

Google guided us in learning  
more details about  
**India's proud astronaut.**



Inspiring Personality Note From --> Hetal, 11 'A'



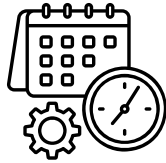
*Truly, the sky is not  
the limit—it is just  
the beginning! 🚀*

Shubhanshu Shukla 🚀

- 🧑 He is a Group Captain in the Indian Air Force.
- 🧑 Trained as a Gaganyatri (astronaut) with ISRO.
- 🌍 In July 2025, he became the first ISRO astronaut to visit the International Space Station (ISS).
- 🚀 His mission was part of Axiom Mission 4, a privately organised spaceflight.
- 🇮🇳 He is the second Indian to go to space, after Rakesh Sharma in 1984.
- ✨ His success is a source of inspiration for students across India.







Sarita Dole, PGT (Maths)

- Maths quizzes reinforce learning, sharpen problem-solving and build confidence.



## Facts about Activity:-

What: IOQM (Offline Exam in Sep 2025)

When: JULY - AUG 2025 Registration & Preparation

Where: PM SHRI K V CRPF NAGPUR

Highlights: Total No. of students participated -

In-chargeship of :

- 1) Mrs. Sarit Dole, PGT (Maths)
- 2) Mr. Vinay Shahare, TGT (Maths)
- 3) Mrs. Swati Vinchurkar, TGT (Maths)

Result: - Yet to come

Vinay Shahare, TGT (Maths)



Swati Vinchurkar, TGT (Maths)

- They promote regular study, enhance time management and highlight areas for improvement.



**\*Crunch Numbers, Boost Brains !\***

## WWGC (Wild Wisdom Global Challenge) City Level Round-1 (Group - A)

“From Curiosity to Conservation  
– A Journey of Knowledge.”

Ms. Arpita



Ms. Aparna

### WWGC Overview

✿ The WWGC 2025, by WWF-India and CBSE, is a wildlife quiz for Classes VI-IX.

This year's theme, "Incredible Insects," explores their vital role in biodiversity through fun quiz rounds and activities.

Top teams will reach the International Finale, with winners earning prizes like an all-expenses-paid trip to a Tiger Reserve.

✨ "Quizzing today, conserving tomorrow!"

## Wild Wisdom Global Challenge – 2025

PM Shri Kendriya Vidyalaya, CRPF, Nagpur

25th August 2025



Mr. Kishore Shengadekar, TGT (So.Sci)

★ **Event Overview:** PM Shri Kendriya Vidyalaya, CRPF, Nagpur proudly organized the Wild Wisdom Global Challenge – School Level Round-1 (Group A) quiz under the guidance of Mr. Kishor Shengadekar.

🎯 **Participation:** A total of 151 students from Classes VI to IX enthusiastically took part, showcasing their knowledge about wildlife and the environment.

🏆 **Results:** After a thrilling competition, two students Ms. Arpita Gawai(Class 9C) and Ms. Aparna Kakade (Class 9A) qualified to represent the school in the City Level Round.

👤 **Leadership & Support:** The program was conducted successfully under the able leadership of Principal Mr. Anil S. Gholpe and Vice Principal Mr. Amir Husain, whose encouragement and support motivated the participants.

🌍 **Impact:** The quiz inspired young learners to deepen their understanding of biodiversity and conservation, making the event a grand success.

✨ "Quizzing for a Greener Tomorrow!" ✨



*Dream. Create. Inspire.*

## 💡 **INSPIRE – MANAK Scheme**

### **Innovation in Science Pursuit for Inspired Research**

A flagship programme of the **Department of Science & Technology (DST)**, in collaboration with the **National Innovation Foundation – India (NIF)**, to foster creativity and innovation among school students (Classes VI–XII).

- **Objective:** Nurture 1 million student ideas/innovations with social & scientific value.
- **Participation:** Schools can nominate **5 best ideas** (max 2 from Class XI–XII, Science).
- **Awards:** Shortlisted students receive **₹10,000 (DBT transfer)**
- **Competitions:** District → State → National level exhibitions & project contests.
- **Selection Criteria:** Novelty, social impact, eco-friendliness, user-friendliness.
- **Recognition:** Top 60 innovations showcased at the **Festival of Innovation & Entrepreneurship (FINE)**.

🌟 "Inspiring Young Minds, Igniting Innovation." 🌟



**In-charge:**  
**Mrs. Harsha**  
**Nikose, TGT (Sci)**



# 🌟 **INSPIRE MANAK NOMINATION** 🌟



## **SMART SOCIAL DISTANCING ALARM**

An intelligent device that alerts people when social distancing norms are violated, ensuring safety in public places.

**Krunal Gaurishankar Hedau,**  
**Class 11 A**



## **BOREWELL WATER LEVEL INDICATOR**

A monitoring device that detects borewell water levels, preventing accidents and promoting efficient water management.

**Swaraj Rajesh Thote, Class**  
**11 A**



## **SMART WASTE SEGREGATION SYSTEM**

An automatic segregation system for waste that enhances recycling and supports sustainable living.

**Sachin Santosh Solanke,**  
**Class 9 B**



## **POLLUTION TO INK CONVERTER**

A creative solution that transforms air pollutants into usable ink, helping reduce environmental damage.

**Mann Dhawley, Class 9 B**



## **ANTI-SUICIDAL FAN**

A life-saving mechanism designed to prevent suicides by introducing safety features in ceiling fans.

**Ankit Kumar Rai, Class 9 B**

✦ **Inspiring Innovation / Building a Better Tomorrow** ✦

*Our students continue to shine through their brilliance, compassion, and commitment to making the world a better place.*





# How Technothlon Exam Shaped My Thinking ?

## ⚡ Technothlon Experience

Organized by IIT Guwahati



Participating in **Technothlon** was both exciting and challenging. The questions truly tested our **logical reasoning** and **mathematical skills**. At first, I struggled, but soon realized the importance of *staying calm and thinking critically under pressure*.

My partner and I discussed tricks, solved problems together, and enjoyed the process. The experience expanded my knowledge and taught me to handle mistakes positively, as errors are a natural part of learning.

Overall, this exam gave me confidence, new experiences, and valuable lessons that will help me in future academic pursuits.

✨ "Challenges build confidence, mistakes fuel learning." ✨

— Impression by **Mas. Sarmad Mahir Husain**, Class 9 'C'

An exam beyond competition

– a path to self-discovery

### AIR Ranking

JUNIOR SQUAD (1041)

Krutika & Soham

HAUT SQUAD (458)

Krunal & Aditya

From PM SHRI KV CRPF NAGPUR 15 HAUT SQUAD and 15 JUNIOR SQUAD

Teams Participated in Technothlon Exam conducted on 13-07-2025.

**Technothlon**  
the international school championship  
Inspiring Young Minds



Technothlon  
Exam  
"The  
Ultimate  
Test  
of  
LOGIC"

<https://technothlon.techniche.org.in/>

## Atal Mega Tinkering Day ...

*Tinkering Today,  
Transforming Tomorrow*



Event In-Charge:  
**Mr. Rajkumar Pouranik**,  
TGT (WE)

## 🚀 Atal Mega Tinkering Day 2025

"Tinkering Young Minds,  
Shaping Bright Futures!"

🔧 One Nation, One Innovation:  
Students built a DIY vacuum cleaner in just 1  
hour!

On **12th August 2025**, students across India celebrated the **Atal Mega Tinkering Day**, organized by AIM, NITI Aayog.

The challenge brought together young innovators to create a **DIY vacuum cleaner** in just one hour, guided by a live online session.

The event highlighted **hands-on learning**, **creativity**, and **innovation**, empowering India's youth to explore technology and inspire change.





## Promotion of Research Attitude in Young And Aspiring For Students (PRAYAAS) Nomination 2025 :-

Budding Researchers of our Vidyalaya

Mentor

Project Guide



Mas. Aharth Zodape

Mas. Tanmay

Mrs. Harsha Nikose

Sh. Panini

## NEERI VISIT (1 day as a scientist 23-JULY-2025) ... ONE DAY AS A SCIENTIST - NEERI

### 1 Day as a Scientist

A joyful day of **curiosity and discovery**! I explored, experimented, and felt the happiness of being a real scientist. ✨

🌟 "Science is happiness in discovery!" 🌟

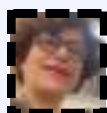
👤 11 STUDENTS OF PM SHRI KV CRPF, NAGPUR ATTENDED THE CSIR PROGRAMME.

📌 ACTIVITIES: HARIT SANGRAHALAY VISIT, WATER & SOIL ANALYSIS, EXPERIMENTS, QUIZ & CREATIVE TASKS.

🏆 STUDENTS WON PRIZES AND RETURNED INSPIRED WITH KNOWLEDGE & CONFIDENCE.

### Guiding Hands behind the drive:

- 1) Mrs. Harsha Nikose, TGT (sci) I/C
  - 2) Mrs. Khemarani Rangari, TGT (sci)
  - 3) Mrs. Seema Rani, PGT (Chem)
  - 4) Mr. Ram Srirao, PGT (Bio)
  - 5) Mrs. Neeta Sisodiya, PRT
- & Other Teachers and Students of the Vidyalaya.



Mrs. Harsha Nikose,  
TGT(Sci)



Mrs. Seema Rani,  
PGT (Chem)



Mrs. Khemarani Rangari,  
TGT (Sci)



Sh. Ram Srirao,  
PGT (Bio)

## Ek Ped Maa Ke Naam 2.0 (Mission Life) ...

### Ek Ped Maa Ke Naam

💚 214 saplings planted in our school!

📌 QR codes labelled for tracking.

👤 Dedicated to mothers with love.

🧠 Activities: Poster Making | Save Water | Reduce Waste  
| Healthy Living

🌟 Together, we grow a greener tomorrow! 🌟

[https://www.youtube.com/watch?v=PP11Qcole\\_E](https://www.youtube.com/watch?v=PP11Qcole_E)





**YOUR SAFETY CODE:  
A STRONG  
PASSWORD**



Mind Behind

activity:

Mrs. Pooja Rawat,  
PGT (CS)



**Cyber Safety Club**

**"Stay Safe, Stay Smart, Stay Secure!"**

To promote digital awareness and safe online behaviour, **PM Shri KV CRPF Nagpur** launched its **Cyber Safety Club** in **July 2025**.

A special activity, **"How to Set a Strong Password for a Digital Account"**, was conducted from **April 25 to July 31, 2025** for **Classes VI-XII**. Students learned about the importance of **strong passwords**, tips to remember them, and why passwords should never be shared.

Interactive sessions and live demonstrations helped enhance students' **digital literacy** and confidence in handling online tools securely. A preliminary Google survey also collected valuable feedback on the **need for cyber safety** in schools.

**"Awareness is the first step to Cyber Safety!"**

Conducted under the guidance of **Mr. Amir Husain (Vice Principal)** and **Mr. Anil S. Gholpe (Principal)**, with support from teachers & students.



[Lets Watch](#)

## Hackathon 2025 Registration – Ideas in Action, Code in Motion.

**Mentor: POOJA RAWAT, PGT (CS)**

**Senior Team**

01 - Tanmay, Prince, Raj, Pradum, Sahil  
02 - Swayam, Aastha, Vidhi, Bhumi, Abdul

**Mentor: RAJKUMAR PAURANIK, TGT (WE)**

**Junior Teams**

01 - Sarvesh, Drishti, Gunjan, Sarmad, Shourya  
02 - Arnav, Sarthk, Samarth, Kavish, Ishant



**Hackathon 2025  
BootCamp**

from 08-09-2025  
to  
11-09-2025



**Hackathon 2025  
BootCamp**

**Completion of  
Assignments by the all  
04 Teams**





# Balloon Rocket Experiment

## Materials Needed:



## 1. Steps:

1. Pass the thread through the straw.



2. Tie both ends of thread tightly between two chairs/walls.



3. Tape the balloon to straw (horizontally).



4. Blow up the balloon and pinch the opening.

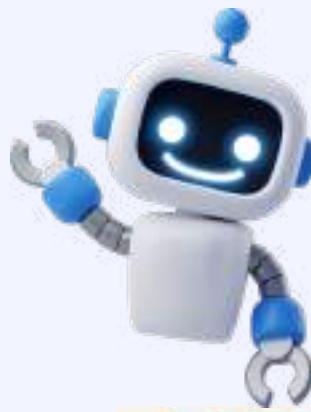


5. Release it → Watch the balloon rocket zoom forward!

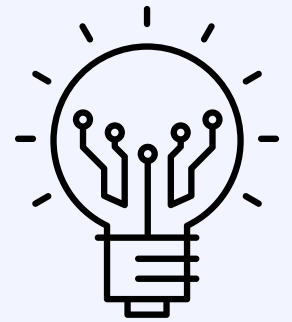
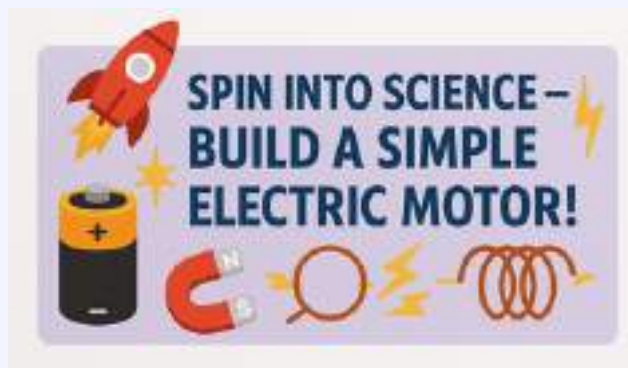


## Science Concept:

For every action, there is an equal and opposite reaction.  
(Newton's Third Law of Motion)



## SEED GERMINATION IN COTTON



## 1. REQUIRED MATERIALS



## 2. ASSEMBLY

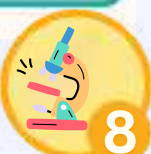


## DID YOU KNOW?

- Technology** - Helped you build the simple electric motor.
- Math** - Guided you to plan and calculate supplies.
- Engineering** - Enabled you to design and construct the motor.
- Science** - Turned electrical energy (battery + wire coil) into mechanical energy (spinning motor).

→ Try experimenting: change the coil, magnets, or current and see how it affects the motor's speed and movement!

## 3. LETS SPIN





If you drop a feather and a stone in a vacuum, which will fall first?



**Brain Sparks**

प्रश्न मंजूषा  
Test your mind,  
spark your knowledge.



What is the fastest thing in the universe?



**DECODE THE SCIENTIST**



Which Indian scientist is known as the 'Wizard of the Nano World'?



KNOWLEDGE



**GUIDANCE: MR. ANIL S. GHOLPE**  
PRINCIPAL

## Key Contributors



★ Core Idea ★

**Mr. Amir Husain**

Vice Principal, PM SHRI KV CRPF,  
NAGPUR

💡 "Inspire curiosity, nurture discipline, and  
empower every student to achieve  
excellence."



★ Creative Desk ★

MRS. POOJA RAWAT, PGT CS  
MRS. SEEMA RANI, PGT CHEM  
STEM I/C



Canva



ChatGPT

THE DIGITAL COMPANIONS THAT SIMPLIFIED OUR JOURNEY

## Content Contributors

### From Teachers

Mrs. Harsha Nikose, TGT (Sci)

Mr. Rajkumar Pauranik, TGT (WE)

Mr. Kishore P. Shengadekar, TGT (So. Sci)

Mrs. Pooja Rawat, PGT (CS)

### From Students

Ms. Hetal, class 11'A'

Mrs. Sarmad, class 9'C'

Mrs. Swaraj, class 11'A'

Mrs. Asavari, class 11'A'

Mrs. Sanidhya, class 11'A'

**पीएम श्री केन्द्रीय विद्यालय सीआरपीएफ नागपुर**