

STEAM COFFEE BOOK





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ABOUT THE PROGRAM

STEAM



Welcome to a world where creativity meets curiosity, and innovation fuels learning!

At NLK Group of Schools, we've been shaping young minds since 1947. Building on this rich legacy, since 2022, we've launched a bold initiative to empower students through real-life experiences - embracing the transformative power of learning by doing.

We are dedicated to nurturing a generation of inventors, design thinkers, and problem-solvers - paving the way for a brighter, better tomorrow.



What STEAM Means to Us :



Science

We spark inquiry and inspire exploration - from molecules to the cosmos, our students question the 'why' behind the world.



Technology

We don't just use technology - we create it. Our learners develop digital confidence & real-world tech skills through coding, simulations, and digital tools.



Engineering

Through innovation labs & design challenges, students learn to build, prototype, and rethink solutions with a problem-solving mindset.



Arts

Here, creativity isn't a subject - it's a way of thinking. Students express, visualize, & innovate through design, storytelling, & visual aesthetics.



Mathematics

We go beyond formulas - our students decode patterns, understand structures, & apply logic to fuel breakthroughs in every STEAM domain.

ENGINEERING DESIGN

We offer students specialized classes in Engineering Design, where they explore various simple machines and engineering tools through hands-on practice. They also learn to create blueprints and gain a strong foundational understanding of core physics concepts. This approach bridges theory with real-world application, fostering analytical thinking and creativity.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

GRADE 6

MODULE 1 : LEVERS

- Students were introduced to the concepts of force and work.
- Students were led to understand that simple machines are basic tools that make work easier by changing the magnitude or direction of force.
- Through model-building, students gained a deeper understanding of how levers work and their mechanical advantages in real-world scenarios.

MODULE 2 : SLOPES & ANGLES

- Introduction to the concepts of Gravity and Friction.
- Students built models to explore how gravity acts and to examine the effects of friction at various angles.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

GRADE 7

MODULE 1 : PULLEYS & WHEELS

- Students built two simple machines.
- In the first project, they built a Pulley frame to understand how a pulley system works.
- In the second project, students built a cart and its launcher to gain insights on how forces are used in the movement of an object.



MODULE 2 : POWER TRANSFER

- Students built upon their knowledge of power transfer mechanisms.
- They built models that demonstrate various forms of power transfer, including right-angle power transmission and intermittent power transfer.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

GRADE 8

MODULE 1 : GEAR RATIOS

- Students were introduced to different type of gears.
- They build projects which further enhanced their knowledge about gear pair, gear reductions, gear train, torque and power ratio.



MODULE 2 : HERCULEAN MACHINES

- Students explored the concept of mechanical advantage through gears, gaining an understanding of how gear systems make work easier by reducing the effort needed.
- By designing and building their own Herculean machines, they applied the concept of power ratio, developing critical problem-solving skills while engaging in hands-on activities that enhanced their understanding of real-world engineering challenges.





CAPSTONE : LEARNING WITH PURPOSE

In the Capstone Project, students tackled real-life problems through collaboration, creativity, and critical thinking. From idea to prototype, they built practical solutions using STEAM principles.

Through “**How Did I Do?**” sessions, they reflected on their journey, celebrated wins, and embraced growth—turning learning into impact.

#Coding

#Programming

#Design Thinking

#Prototyping

#Creativity

CODING/APP DEVELOPMENT

We offer specialized coding classes in App and Game Development, where students learn programming fundamentals using platforms like Tynker and MIT App Inventor. Through hands-on projects, they design, code, and create their own apps and games - building logic, problem-solving, and digital creativity.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

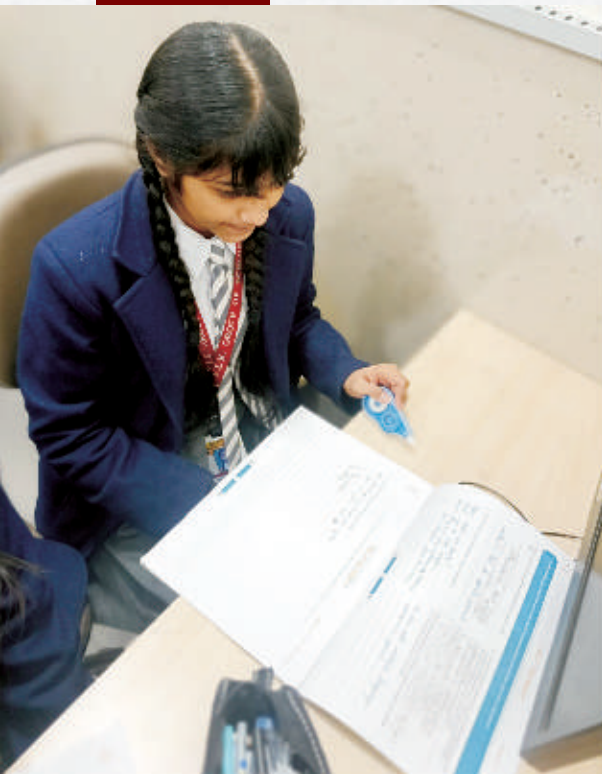
GRADE 6

MODULE 1 : TYNKERING WITH GEOMETRY

- Students were introduced to the concepts of shape designing in coding and they get to know about the commands that plot these shapes either individually or through combination.

MODULE 2 : HELP THE NEEDY

- In this module, students worked on creating an app for specially-abled people.
- They built an app that guides visually-challenged person to walk and helps speech-impaired person to communicate.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

GRADE 7

MODULE 1 : CANNON TALES

- Students were introduced to the art of gaming simulation.
- They built a gaming simulation involving shooting aspects alongside principles of physics.
- They also learnt about variables & making it work for different elements of game.



MODULE 2 : THINK PRODUCTIVE

- In this module students built productivity app such as Event Reminder and Attendance App, which saves and remind us for the daily scheduled events.
- Further, they implemented their learnings & solved a real-world challenged scenario.



FROM IDEAS TO IMPACT : SESSION HIGHLIGHTS

GRADE 8

MODULE 1 : MAJOR LAZER

- Students built a space-shooting game and learned about creating phantom endless appearances of objects moving post the controller.



MODULE 2 : PIRATE GAMES

- Students created a full-fledged game using a pirate theme.
- Students used variables to manipulate different elements of the game, further enhancing the understanding for the same.





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INNOVATION EXPO 2024

Innovation Expo 2024, held on 26th October 2024 at NLK's Wendy School, was a dynamic celebration of creativity and innovation, graced by dignitaries like **Shri M.N. Sabharwal** (Former DGP, J&K), **Dr. Abhishek Chaturvedi** (Director, NLK Group of Schools), **Ms. Sanchita Kapoor** (Core Team Member), **Ms. Aditi Agarwal** (Creative Associate) and **Dr. Supratik Banerjee** (Assistant Professor, IIT Kanpur).

The expo featured a powerful showcase of STEAM projects, where students presented inventive, hands-on solutions blending science, technology, engineering, arts, and mathematics. It was an inspiring event that reflected NLK's commitment to nurturing future-ready minds through experiential learning.



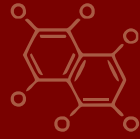


SRIJAN : THE FUSION OF LEARNING & INNOVATION

At NLKVM Inter College, our talented students came together for an inspiring STEAM Exhibition titled 'Srijan : The Fusion of Learning & Innovation.' The event showcased innovative, subject-integrated projects with a special highlight on interactive games created through coding.

Blending science, technology, engineering, arts, and mathematics, students designed engaging, hands-on experiences that reflected both creativity and computational thinking. Their coding-based games not only entertained us but also demonstrated their growing confidence in digital literacy and problem-solving area. This celebration of learning reaffirmed NLK's vision to empower young minds through experiential, future-ready education.





"Invention is curiosity in action."

