

# InspirelQ Lab

"IGNITING YOUNG MINDS THROUGH STEM & CREATIVITY"



# WHERE CURIOSITY GROWS INTO CREATION—INSPIRING TOMORROW'S INNOVATORS TODAY

A STEM & ROBOTICS LEARNING SPACE FOR AGE 3 TO 14+, ALIGNED WITH NEP 2020

## Message from the Founder

As a PhD in Control Systems with over 15 years of experience in STEM research and education, I have witnessed how curiosity transforms ordinary students into confident innovators. Driven by a lifelong passion to make science practical and joyful, I founded InspireIQ Lab — a space where young minds can explore robotics, coding, and hands-on science that sparks lifelong learning beyond textbooks.

# Inspiration

The 21st century demands far more than memorizing facts; it calls for creativity, critical thinking, and problem-solving skills. Children learn best when they experiment, explore, and discover answers themselves. Yet, many students—especially in rural and semi-urban schools—rarely get access to such opportunities.

Aligned with the National Education Policy 2020 (NEP 2020), InspireIQ Lab introduces STEM (Science, Technology, Engineering, and Mathematics) in a playful and age-appropriate manner. By guiding children as young as 3 years to build simple circuits, program stories in ScratchJr, or design basic robots, we help them develop confidence in using technology to solve real-life problems.

Our mission is to bridge the gap between traditional classrooms and modern innovation hubs, nurturing a spirit of inquiry, innovation, and resilience in every child — no matter their background.

### Impact

InspireIQ Lab serves as a bridge between theoretical instruction and practical innovation. Each module is carefully mapped to complement school curricula and NEP-recommended competencies. Students progress from hands-on circuits and basic robotics to Arduino-controlled devices, sensor-driven smart systems, and introductory AI models that reveal real-world applications of physics, coding, and mathematics.

This experiential approach enhances logical reasoning, computational thinking, teamwork, and digital literacy while fostering curiosity, adaptability, and design thinking. Schools that adopt InspireIQ sessions observe greater classroom engagement, stronger STEM subject performance, and measurable improvement in students' creativity, collaboration, and problem-solving abilities — outcomes central to NEP 2020.

Together, we can empower every child to become a curious learner, a confident creator, and a responsible innovator.

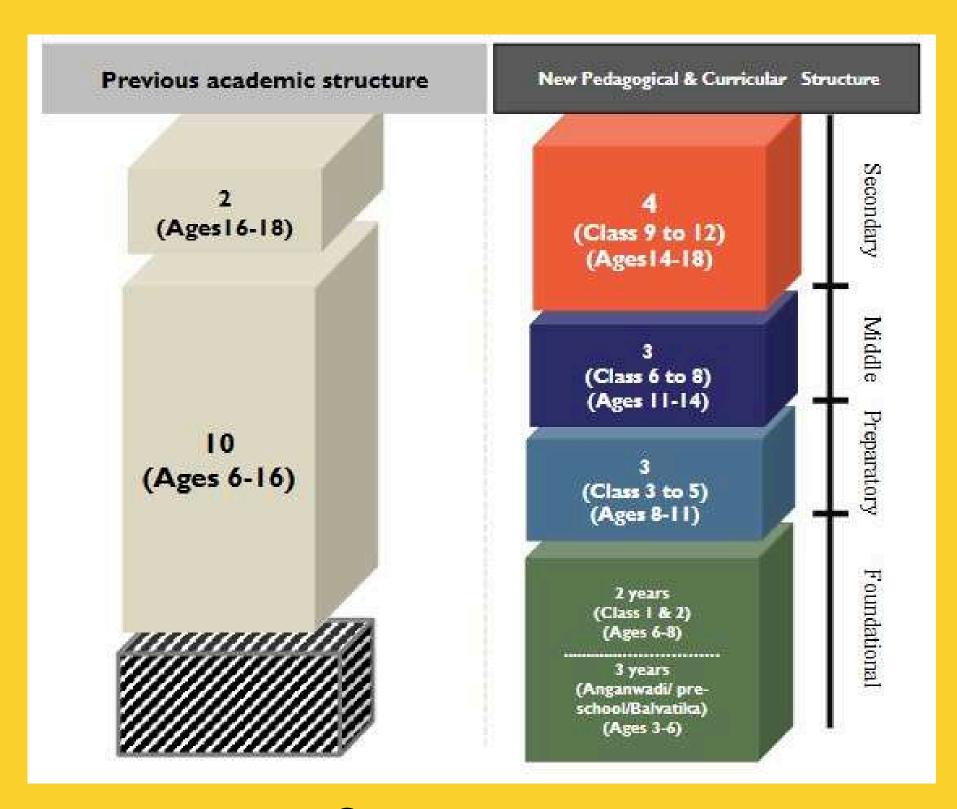
Let's prepare children for the future — one inspiring project at a time.



## NEP 2020 Alignment

InspireIQ Lab is designed in full alignment with NEP 2020 learning stages, offering a progressive pathway where students explore, experiment, and innovate through age-appropriate STEM modules.

- Foundational Stage (3–8 years): Play-based, activity-based learning; sensory exploration; introduction to literacy, numeracy, and creativity.
- Preparatory Stage (8–11 years): Discovery, hands-on science, coding basics, teamwork, logical reasoning.
- Middle Stage (11–14 years): Abstract thinking, advanced problem-solving, robotics, AI, environmental awareness, design projects.
- Secondary Stage (14–18 years): Career-oriented skills, advanced coding/AI/IoT, innovation challenges, entrepreneurship.



Ref.: NEP 2020

# Age-Wise Curriculum

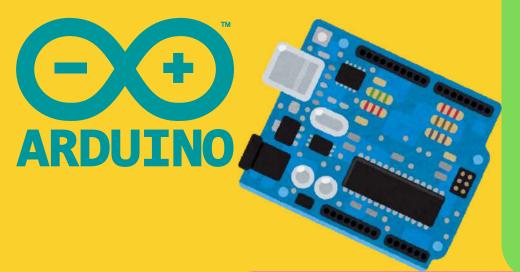




Age: 14+

#### **Future Pioneers**

Future-Ready Skills & Innovation Mindset



Age: 11 to 13

#### **Curious Innovators**

Computational Thinking & Real-World Applications



Age: 8 to 10

#### **Bright Builders**

Teamwork, Logical Thinking,
Digital Literacy



Age: 3 to 7

#### Little Explorers

**Curiosity & Early Problem-Solving** 



Aligned with NEP 2020 Learning Stages – Inspiring Curiosity to Innovation"

# Age-Wise Curriculum Snapshot

• (Aligned with NEP 2020 Learning Stages)

Stage & Age Group	Focus Areas	Sample Modules	Measurable Outcomes
Foundational (Ages 3–5) Early Innovators	Play-based STEM, sensory learning, early coding	<ul> <li>Magnet Magic</li> <li>(push &amp; pull)</li> <li>Robot Friends</li> <li>(moving toys)</li> <li>ScratchJr</li> <li>Coding Fun</li> <li>(age:5+)</li> <li>Paper</li> <li>Circuits (light-up card)</li> </ul>	<ul> <li>Builds</li> <li>curiosity &amp;</li> <li>observation •</li> <li>Develops fine</li> <li>motor &amp;</li> <li>sequencing</li> <li>skills • Pre-</li> <li>coding</li> <li>fluency</li> </ul>
Preparatory (Ages 6–10) Young Explorers	Hands-on science, beginner robotics, logical thinking	Robotics Starter Kit (line follower robot), AI in Daily Life (voice/face recognition demos), Space Science (simple rockets), Scratch & Micro:bit coding, Green Energy (solar car)	<ul> <li>Problem-solving mindset</li> <li>Teamwork &amp; collaboration</li> <li>Digital literacy &amp; logical reasoning</li> </ul>

# Age-Wise Curriculum Snapshot

Stage & Age Group	Focus Areas	Sample Modules	Measurable Outcomes
Middle (Ages 11–12) Emerging Innovators	Arduino, AI basics, applied science projects	• Arduino Smart Light Project • Al for Beginners (image/voice models) • Environmental Tech (water filter, purifier models) • Robotics Challenge • App Coding (MIT App Inventor)	Computation al thinking • Abstract reasoning & STEM application • Creativity in real-world problem-solving
Secondary (Ages 13+) Future Leaders	Advanced robotics, AI/IoT, innovation & entreprene urship	• Advanced Robotics (multisensor bots) • Al & Machine Learning (Python) • IoT Projects (Smart irrigation/home automation) • Innovation & Startup Challenges	• Future-ready technology skills • Innovation & entrepreneur ship mindset • Leadership, collaboration & design thinking

# Gallary



First Steps into STEM and Robotics



Collaborating to Solve Challenges



**Coding Their First Story** 

# Patron & Leadership Mentor



A distinguished academician and researcher with over 39 years of teaching and research experience in power systems, smart grids, and renewable energy.

- Prof. (Dr.) Chandan Kumar Chanda
  Ph.D. (Engineering), IIEST Shibpur
  M.Tech (Electrical Engineering), Indian
  Institute of Technology Kharagpur
  B.E. (Electrical Engineering), National
  Institute of Technology Durgapur
- Author of 14 books and 173+ research publications in leading journals and conferences.
- Recipient of multiple national and international awards.
- Expert member in various national academic and technical committees.

As Patron & Academic Mentor, Prof. Chanda brings unparalleled academic leadership, technical vision, and guidance to inspire future innovators and strengthen the lab's mission of quality STEM education.





"His visionary leadership and expertise in communication systems, cyber security, and strategic studies guide our mission to build a future-ready generation through hands-on STEM and technology education."

Air Commodore Niranjan Kumar Parhi (Retd.)
B.Sc. Engg (Electronics & Telecommunication),
M.Tech (Communication), IIT Bombay
M.Sc (Strategic Studies), University of Madras

Masters in Management Studies (MMS)

- Distinguished veteran of the Indian Air Force
- Founder Member of the Defence Cyber Agency (DCyA), Ministry of Defence, Govt. of India
- National Cyber Security Scholar (ISAC India)
- Certified CISSP, CISA, CISM

#### Founder & Core Team

Founder & Director, InspireIQ Lab

Dr. Debasis Acharya, Ph.D (NIT Nagaland)

Vision, program design, partnerships, training teachers

Technical Lead – Mr. Pokhraj Dey, B.Tech in CSE

Project implementation, coding, AI & robotics training

STEM Instructor (Primary Section) – Mrs. Arunima Singha Roy, M.A., D.EL.ED.

Conducting daily lab activities for children, support sessions

Research & Innovation Consultant-Dr. Saurav Basak, PhD (IIT Dhanbad)

Mentoring projects, advanced STEM/AI/Robotics guidance

Academic Consultant (Science Education) – Dr. Suparna Panchanan, PhD (Mizoram University)

Pedagogical guidance for early learners, activity design

# **Teaching & Support Faculty**

Our lab is supported by a team of passionate STEM educators who conduct weekly hands-on sessions, student projects, and learning workshops under the guidance of the Core Team.

- Ms. Ishita Dey STEM Educator (Junior Section)
- Mr. Sumit Roy, B.Tech Coding Instructor
- Mr. Indrasish , MTech Coding Instructor
- Mr. Jahir Ahamed, B.Tech Web developer
- Mr. Susmit Chakraborty, M.Tech—Robotics Trainer
- Mr. Subinoy Panda, B.Tech Lab Assistant / Coordinator
- Mr. Dhruba Mondal, BCA- Arduino, IoT

#### Founder's Note



At InspireIQ Lab, our mission is to ignite curiosity, creativity, and innovation among young learners. We believe every child has the potential to become a problem-solver and future innovator when guided with the right tools and environment.

"STEM is not just about science and technology—it's about building a mindset of exploration, resilience, and imagination."

Dr. Debasis Acharya, Founder

### **Contact Page**

Let's Build Future-Ready Classrooms Together

Partner with InspireIQ Lab to bring world-class STEM, Robotics, and AI learning to your school. Our programs are designed to align with NEP 2020 and equip students with the 21st-century skills they need to thrive.

Contact Us

Dr. Debasis Acharya

Founder & Lead Mentor - InspireIQ Lab

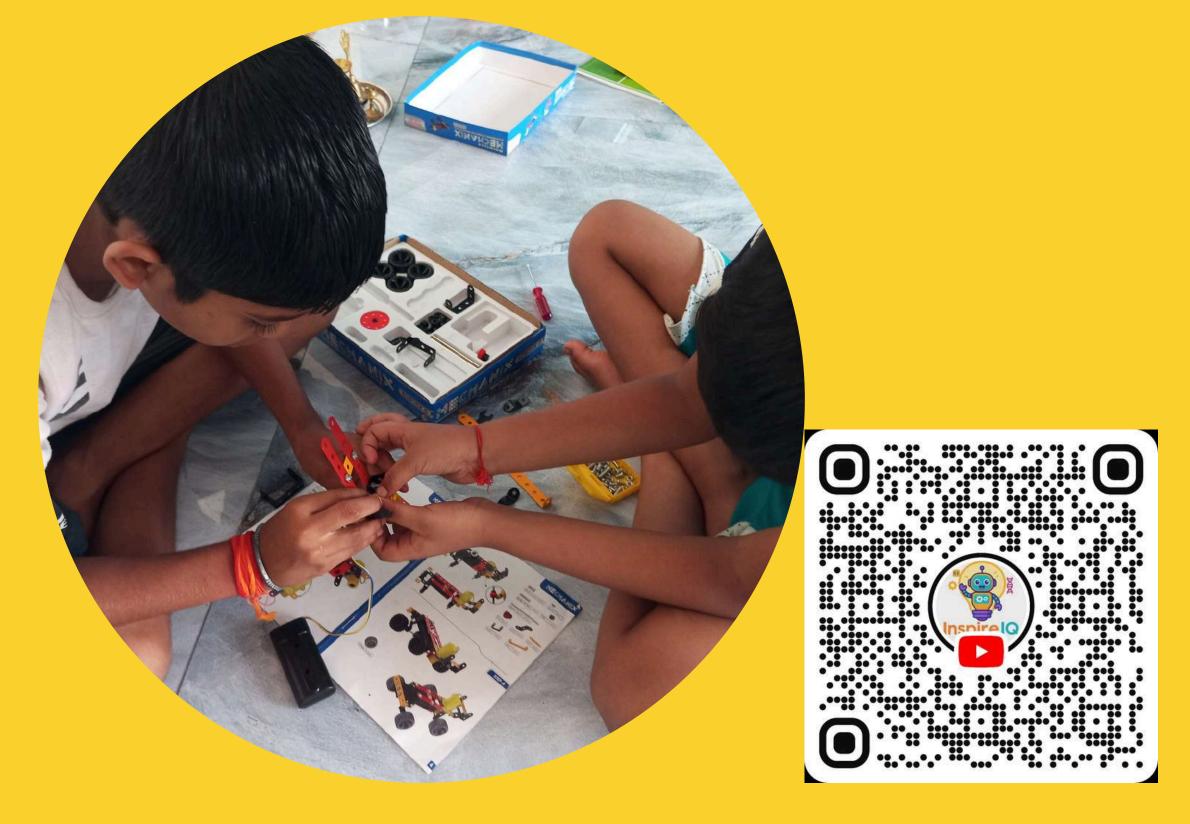
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"Igniting Curiosity, Inspiring Innovation."