

AI and Robotics Program for Schools

A holistic ecosystem fostering learning, creativity, and innovation through ICT, robotics, AR-VR, AI, and ML for 21st-century skills.



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Expression:
Happy



Scan to Watch AI and
Robotics Lab Video

Aligned with CBSE/ICSE
Skill Subjects and NEP 2020

All-Inclusive ICT, AI, and Robotics Program

Our ICT, Coding, AI and Robotics program enables schools and educational institutions to engage in interactive learning. It helps kids aged 6 and above to understand the classroom curriculum of information and communication technology, complex industry-standard AI, building immersive learning experience with AR-VR and robotics concepts in a playful manner through exciting application-based DIY projects.

-  **Structured Curriculum with Activity Books**
-  **Coding and AI Platform: PictoBlox**
-  **Hands-On AI and Robotics Kits: Quarky**
-  **Teacher Development Program**
-  **Learning and Assessment System**
-  **International Competitions and Innovation Festival**



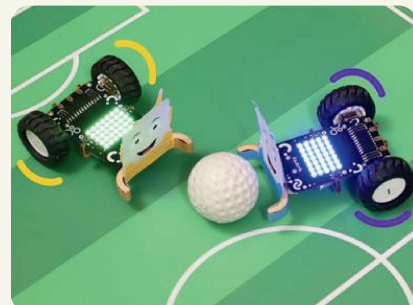
Technologies in Focus to Build 21st-Century Skill Sets



Coding - Block and Python



Artificial Intelligence



Robotics and Electronics



Self-Driving Car Technology



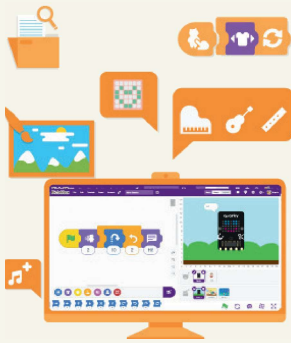
Experiential Learning through 3D and XR Studio



Robot Localization and Automation

Curriculum Aligned with Global Standards

STEMpedia provides a year-long curriculum for CBSE and ICSE classes 1-10. These courses are divided into four stages aligned with NEP 2020 **Section 4.5** and **Section 23**.



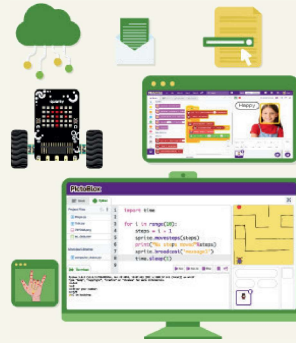
Pre-Primary Class 1-2

- Learning Computer Basics
- Creative Drawing Tools
- Algorithmic Literacy
- Intro to AI and Robotics



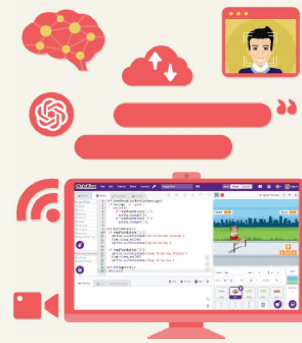
Primary Class 3-5

- Computer Fundamentals
- Game Design
- AI and ML Activities
- Hands-On Robotics



Middle Class 6-8

- Block and Python Coding
- Artificial Intelligence
- Robotics and Tinkering
- Computational Thinking



Secondary Class 9-10

- Advanced Coding, AI and ML
- Robotics with Python
- Computer Vision and NLP
- Data Science



Student Learning
Coding with PictoBlox



Robotics Education for Students in
AI Lab, South Korea



AI Lab Setup at Kalyani
International School, Pune



Hands-on Learning Session at
Seth C.N. Vidyalaya, Ahmedabad

CBSE Curriculum and Practical Activity Books

Our course and practical activity books for CBSE are aligned with NEP 2020 guidelines and CBSE **Subject Code 417** fulfilling various objectives like preparing students for an AI-driven economy, experiential learning, skill development, hands-on coding, AI and robotics.



Interactive Coding, AI, and Robotics Books

Class 1 to 10

Coding, AI, and Robotics to foster creativity and innovation with **hands-on activities** and exciting real-world application-based projects. A book aligned with the **CBSE skill subjects**.

HIGHLIGHTS



Block and Python Coding



Robotics



Algorithmic Literacy



Computational Thinking



Lab work



Project Work



ICT, Coding, AI, and Robotics Books

Class 1 to 8

This curriculum delivers robust education in ICT, coding, AI, and robotics integrating **practical lab activities** with classroom learning for **hands-on mastery**.

HIGHLIGHTS



Block Coding



Python Programming



Robotics



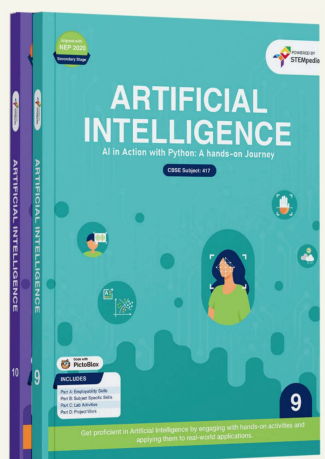
Worksheet



Lab Work



Project Work



Artificial Intelligence Books

Class 9 and 10

Subject Code - 417

Artificial Intelligence textbooks and practical activities for CBSE classes **9th and 10th** aligned with **subject code 417**, covering the topics proposed in the **CBSE AI syllabus**.

HIGHLIGHTS



Python Programming



Machine Learning



Data Science



Worksheet



Lab Work

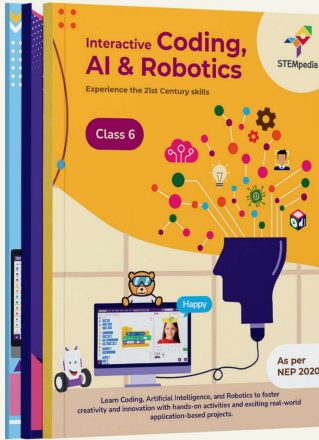


Project Work

Course and Practical Activity

ICSE Curriculum and Practical Activity Books

Our course and practical activity books for ICSE are aligned with NEP 2020 guidelines, and ICSE **Subject Code 66** fulfills various objectives like developing competencies in Robotics and AI via classroom instruction, activity-based learning, application of robotics and AI.



Interactive Coding, AI, and Robotics Books

Class 1 to 10

Fostering creativity and innovation through **hands-on coding, AI, and robotics activities** with exciting, real-world projects. Aligned with the ICSE AI syllabus.

HIGHLIGHTS



Block and Python Coding



Robotics



Algorithmic Literacy



Computational Thinking



Lab work



Project Work



ICT, Coding, AI, and Robotics Books

Class 1 to 8

This program immerses students in **ICT, coding, AI, robotics through engaging activities** and hands-on labs, fostering **critical thinking** and **problem-solving skills**.

HIGHLIGHTS



Block Coding



Python Programming



Robotics



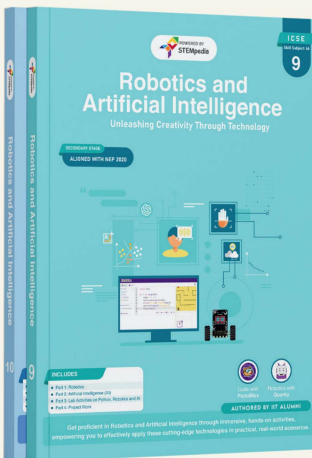
Worksheet



Lab Work



Project Work



Robotics and Artificial Intelligence Books

Class 9 and 10

Subject Code - 66

Robotics and AI textbooks and practical activity books for **ICSE classes 9th and 10th** aligned with **subject code 66**, covering the topics proposed in the **ICSE Robotics and AI Curriculum**.

HIGHLIGHTS



Python Programming



Machine Learning



Robotics



Worksheet



Lab Work



Project Work

Books Authored by IIT Alumni

Quarky - The Brain of AI Lab

Quarky is a super fun AI companion that helps in learning new technologies like artificial intelligence and robotics in an engaging and enjoyable way. Kids can create a variety of projects like self-driving car, pick and place robot, walking robots, IoT house and gardening system and much more using Quarky and its DIY Add-on kits.



Learn Industry-Standard Concepts

Understand widely used AI concepts such as ML, face, object & speech recognition, etc.



One Kit - Infinite Creations

Make hundreds of interactive real-world applications-based projects.



DIY Kits - Plug and Play

Create advanced projects like Quadruped, Humanoid, IoT House etc. using add-on kits.



Accessible Learning at Home

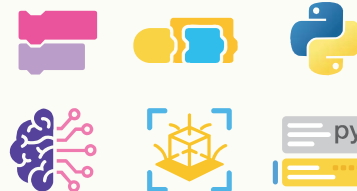
Code and control all your projects anytime, anywhere using a Smartphone or a tablet.

PictoBlox - AI Software Buddy

PictoBlox is a Block-based and Python coding software available across all platforms, from smartphones to laptops, that brings hardware-interfacing and AI-learning to your fingertips. It empowers students to make interactive animations and games, program actions for robots, build AI projects with ML, design 3D models in 3D and XR Studio, create projects based on IoT, and more.



Programmable Using Block Coding and Python



Supports



Exploring Cutting-Edge Technologies with PictoBlox



Robot Interaction



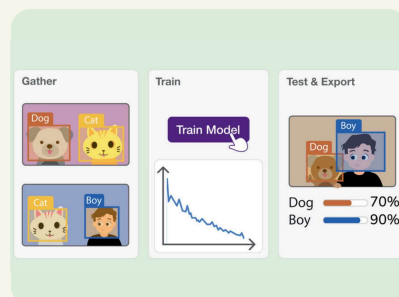
Object and Face Detection



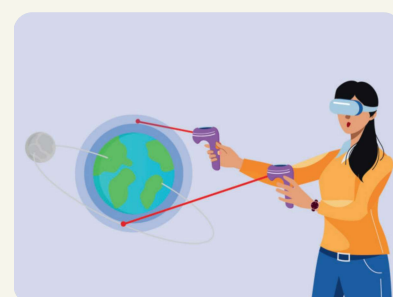
Text Recognition and NLP



Speech Recognition



Machine Learning



Augmented and Virtual Reality

360° Holistic Teacher Upskilling Program

STEMpedia's comprehensive teacher training program empowers educators with hands-on experience in AI, coding, robotics, electronics, drone technology, and 3D-printing, equipping them with the tools to integrate these essential 21st-century skills into their classroom teaching.

Onsite 2-5 Days Teacher Training



International Educator Bootcamp



Skill-Based Workshops/Webinars



Key Features of Teacher Training



Expert-Led Sessions



Hands-on Learning and Skill Development

Value for Educators



Enhanced Teaching Skills



Career Advancement Opportunities

Teacher Training Outcomes



Enhanced Classroom Engagement



Effective Curriculum Mastery



Get a Transformative Learning Experience



Access to AI, coding and robotics teaching resources



Interact with global community of passionate and visionary educators



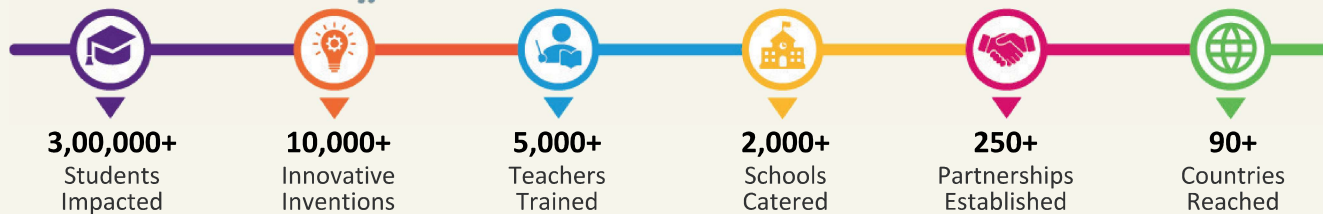
Training on coding, AI, ML, XR, robotics and electronics



Badges & Certificates accredited by ARTPARK, and STEMpedia

Codeavour International - The Biggest Innovation Fest for the Next-Gen

Codeavour is an international AI and coding competition that aims to inspire children to unleash their programming potential and create innovative projects. Organized by STEMpedia in collaboration with national and international government bodies and private organizations, Codeavour provides a platform for young minds to showcase their skills and passion for technology.



Voices that Inspire the Tech Program



In our effort to nurture responsible citizens, AI and algorithmic literacy are crucial. Children must grasp the functions and impacts of these technologies across various domains. Integrating them into classrooms is essential for informed understanding and engagement.

Prof. Dr. Teemu Leinonen, University of Arts Helsinki, Finland



To enhance the logical and analytical reasoning, NEP has introduced coding in the curriculum. We have introduced PictoBlox to our students, which is a block-based and python programming software to learn coding along with AI and robotics.

Divya Khandelwal, Head ICT Department, The Kalyani School, Pune



As a teacher, I have always faced some challenges, especially having to do with block-based coding for grades one and two, but now that PictoBlox Junior has been introduced, it will now be easier. Thanks to the STEmpedia team for this great initiative.

Kelvin Mugo Kinyua, Coding and Robotics Teacher, Lions School, Kenya



The Complete Ecosystem for Your School



AI and Robotics Lab Setup

- AI and Robotics Kits: Quarky Kits and its DIY Add-On kits, STEM kits, consumables, and lab decorative.
- Demo projects for showcase.
- Lab layout planning and setup.
- Inauguration of lab to create awareness amongst students and parents.



Teacher Training and Resources

- 2/5 days of on-site capacity building of school teachers on equipment, content, and operation processes, along with year-long hand-holding.
- Teachers will be provided with class-wise teaching material, lesson plans, activity sheets, and assessment guides.
- Participant's Perks: Certificate affiliated with ARTPARK, and STEMPedia for all the participating teachers.



Year-long Support and Service Plan

- 12-month warranty on equipment and extended warranty under annual maintenance.
- Regular teacher upskilling and doubt solving sessions.
- Comprehensive PictoBlox software licensing is available to all students for enhanced learning.
- Online and offline support is available for all types of queries.



Events and Competitions

- Annual Innovation Festival: A uniquely designed in-school event to showcase all projects and inventions developed by students.
- Participation in International AI, Robotics and Coding competitions like Codeavour International.



STEMpedia

Transforming Young Minds into Innovators

STEMpedia, a global experiential learning platform, enables K-12 institutions to foster learning, creativity, and innovation in coding, AI, ML, AR-VR, and robotics. We empower kids 4+ to grasp complex AI and robotics concepts through engaging, real-world DIY projects, building essential 21st-century skills.

Our Founders



Dhrupal Shah
Chief Executive Officer
IIT Kanpur Alumni



Pankaj Verma
Chief Technology Officer
IIT Kanpur Alumni



65+
Countries Reached



2,500+
Schools Globally



20,000+
Teachers Trained

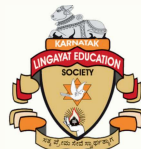


2,100,000+
Students Impacted

Our Renowned Partners



Our Growing Schools Network



and many more.

Reach Out to Us

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