Report: 3-Day STEMpedia Robotics Training

Trainer: Artharv Sir
Location: Govardhan Skill Centre
Dates: **5th, 6th, and 7th May 2025**
Participants: Onkar, Shrikant, Kavita, Jivan, Sunil, Amit

Day 1 – 5th May 2025: Introduction to PictoBlox & Block Coding

1. Junior PictoBlox Interface (for 4+ years kids)

- Big and colorful blocks make it easy for young learners.
- Used voice, motion, and logic blocks.
- Learned basic coding concepts like:
  - **Movement**
  - **Looks** (changing costumes, etc.)
  - **Sounds**
  - **Control** (repeat, wait, etc.)
  - **Events** (when flag clicked)
- Useful for storytelling, animations, and fun projects.
- Introduced coding using shapes and arrows – simple visual method for small kids.

2. Block Coding (for older students)

- Introduced standard-size coding blocks with more details.
- Learned about:
  - Variables, functions, operators
  - Customizing blocks
  - Making animated stories and games
- Focus on logical thinking and creativity through coding.

Day 2 – 6th May 2025: Advanced Coding with AI & Quarky Robot

- **AI Extensions** in PictoBlox:
  - Face detection
  - Object detection
  - ChatGPT integration
  - Text-to-speech features
- **Introduction to Quarky Robot**:
  - Learned hardware functions and working of Quarky.

- Blocks to control robot movements, sound, LED matrix, etc.
- Control robot wired or wirelessly via mobile using Bluetooth.

➢ **Understanding each block's function** through hands-on activities.

➢ **STEAM Pedia Account**:

- All teachers signed up and received 1000 credits for AI and extension features.
- Guidance on how to get more credits through support WhatsApp group.

➢ **Teacher Resources Provided**:

- PPTs, Worksheets, Certificates
- LMS access through email (Google account of each teacher)

Day 3 – 7th May 2025: Robot DIY Kits & Hands-On Projects

➢ Visited and explored **DIY Robot Kit Website**

➢ Assembled different robots using block coding:

- **Horizontal Pick & Place Robot**
- **Vertical Pick & Place Robot**
- **Gripping Robot**
- **Obstacle Avoiding Robot**

➢ Teachers successfully built robots and coded them for real-time functioning.

➢ Practical understanding of mechanical structure, movement, and programming.

Conclusion:
All staff members actively participated and learned the basics of coding, robotics, and AI using STEMpedia tools. The training was interactive and helped teachers gain confidence in using robotics kits and software for teaching students effectively.

How to Start the Course from This Training

After completing the 3-day training, our teacher staff is now ready to begin a structured robotics and AI learning course for students. Here's how we can launch and conduct this course:

Here course from Steam Pedia:

Class Level	Lessons	Key Learning Areas	Certificate	Teach. Resources
Class 3	30	Basic block coding, storytelling, robot intro	Yes	Yes
Class 4	30	Looks, sounds, animation, basic AI extension	Yes	Yes
Class 5	30	Loops, sensors, robot control, LED, sound	Yes	Yes
Class 6	30	Bluetooth control, voice, matrix display, AI tools	Yes	Yes
Class 7	30	Object detection, variables, robot making	Yes	Yes
Class 8	30	Smart robot projects, model training	Yes	Yes
Class 9	30	Machine Learning, chatbot, sensors, actuators	Yes	Yes
Class 10	30	AI + Python, automation projects, real-time robots	Yes	Yes
Class 11	31	AI tools, robotics, image/voice control	Yes	Yes
Class 12	31	Smart automation, ML, career-based robotics projects	Yes	Yes

🎯 Final Outcome

- Students gain confidence in coding, AI, and robotics.
- Ready for **competitions**, **science fairs**, and **future careers** in tech.
- Build a **digital portfolio** with real project experience.
- Earn a **globally recognized certificate** from STEMpedia.

Steps to Start the Course :

1. **Prepare Student Email List**
   - Collect student names and active Gmail IDs.
2. **Send to STEMpedia Team**
   - Email the list for registration and Student ID generation.
3. **Student Enrollment**
   - Students log in at https://courses.thestempedia.com.

- Courses appear by class level (e.g., Class 5 – Coding, AI & Robotics).

4. **Access & Learn**
   - Each lesson includes:
     - Video
     - Coding activity
     - Quiz/worksheet
     - Hardware task (if needed)
5. **Monitor Progress**
   - Teachers track course progress.
   - Students complete lessons and get certified.