TECH FOR KIDS ACADEMY

Electronics and Programming Basics
11-12 Years old

COURSE DESCRIPTION

An introductory course to electronics and programming, where students engage in hands-on experiments and projects. Learners build simple circuits, use electronic components, and program with Arduino.

Expected Learning Outcome

PROBLEM-SOLVING   TECHNICAL SKILLS   CREATIVITY   INNOVATION!

TOPIC COVERS

Intro Electroncis	Circuit Components	Build Circuits	Arduino Basics	Core Programming
Digital Control	Analog Sensors	Simple Automation	Project Planning and Debugging	End of Course Project

COURSE RUBRIC

Quizzes: 10%

Attendance: 10%

Homework: 10%

Class Participation: 20%

End of Course Project: 50%

TEACHING/LEARNING APPROACH

- **Experiential Learning:** Students gain foundational knowledge through direct interaction with electronic components and real-world applications.
- **Project-Based Activities:** Learning is driven by hands-on projects that integrate coding with hardware to reinforce core concepts.
- **Guided Experimentation:** Students explore and test ideas in a structured environment that encourages curiosity and safe trial-and-error learning.
- **Peer Collaboration:** Teamwork and shared problem-solving enhance understanding and build confidence through group engagement.

PARENTAL SUPPORT

Parents play a key role by encouraging regular attendance, showing interest in their child's projects, and supporting practice at home. Active involvement reinforces learning and keeps students motivated.

STUDENT COMMITMENT

This weekend course requires consistent attendance, focus during sessions, and a willingness to explore and complete projects. A positive attitude and steady participation help students gain the most from the program.

Important Note: To receive a Certificate of Completion, students must attend at least 60% of the total class sessions (8 sessions out of 12).

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