

## SENIOR SCOUTS

Age Range: 12 – 14

### Cycle Overview

The **Senior Scouts** program is designed to help learners explore more advanced concepts across the various fields. In this cycle, they dive deeper into their passions and interests, gaining hands-on experience. By the end of the cycle, learners will have the opportunity to explore **career-oriented pathways**, giving them insight into future study and career options.

### Skills and Competencies

- **Competency:** Solving complex problems with logic and strategy, thinking critically to structure ideas, creating innovative solutions through imagination, and adapting effectively to new challenges.
  - **Future Skills:** AI Ethics; Cloud Computing; Digital Security; Engineering Concepts
  - **Judgment Skills:** Risk Assessment; Ethical Use of Technology; Strategic Thinking
- Technical Skills:** Programming; Robotics Engineering; Cybersecurity; Web Development

Levels' Distribution			
Fields	Level 1	Level 2	Level 3
Computer Sciences	✓ Functions and Variables	✓ Introduction to Multithreading and Parallel Programming	Orientation to Professional-Level Technologies:  ✓ Programming using Python ✓ IOT using Arduino ✓ Web Development
Robotics	✓ Gyro Sensor and Gears	✓ PID Line Follower	
AI	✓ Supervised VS Unsupervised Learning	✓ Introduction to cloud computing and Speech Recognition	
Design	✓ Color Theory	✓ AI tools in graphic design	
Sciences & Math	✓ Angles	✓ Modulation and Signal Encoding	
Network & Security	✓ Cyber Attacks	✓ Types of Networks and Transport Layer	