

Conference *ECSA2026: Citizen Science between Centre and Periphery*

Youth4Diagnostics

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Short abstract:

Youth4Diagnostics empowers secondary school students to explore water safety. By collecting and analyzing samples, create diagnostic tools and contribute to an open database on water biodiversity. The project connects science with community action, fostering innovation and public health awareness.

Abstract:

Youth4Diagnostics is a two-year STEAM-based initiative that engages high school students in real-world water diagnostics through citizen science. Students collect and analyze water samples from diverse environments (rivers, lakes, coastal areas, tap water), applying microbiology protocols, rapid point-of-care (POC) diagnostics, and DIY technologies (Arduino, 3D printing, colorimetric assays). By co-designing sampling protocols and diagnostic tools, participants contribute to a shared open database on water biodiversity and pathogens in Crete.

The project promotes scientific literacy, hands-on innovation, and community awareness while building long-term citizen engagement in water safety and public health.

Key Objectives:

- Raise awareness of microbial biodiversity and waterborne pathogens.
- Train students in microbiology, diagnostics, and data-driven analysis.
- Co-create innovative POC tools through STEAM approaches.
- Build an open-access database on local water quality.
- Disseminate outcomes at science conference, hackathons, and citizen science events.