

“Go Green for a Sustainable World”

Erasmus+ project 2025-1-FR01-KA220-SCH-00036613



Co-funded by
the European Union



Train-the-teacher workshop

**Scientific concepts & new digital tools for environmental
science education in the climate change era**

Ioannina, May 18-21, 2026

By Ecomuseum Zagori S.C.E.



With the support of

University of Ioannina, Mathematics Department

JOIST Innovation Hub Ioannina





WORKSHOP SCHEDULE



Day 1 - 18/05: Climate change causes, effects & future

Afternoon - 3h

@Ioannina (Mathematics Department Seminar Room, University of Ioannina / UoI)

15:00-18:00 - Workshop introduction & theory

- Icebreaker, workshop outline (1h)
- Global warming and climate change - Dr. A. Gioti (30 min)
- Break (15 min)
- Climate change effects on biodiversity - Dr. A. Gioti (45min)
- Preparation for mock citizen science event (30 min)

Day 2 - 19/05: Awareness and citizen science as solutions

Morning & Afternoon - 7h30

@Zagori area and Ecomuseum Zagori, Ano Pedina

08:30 - 12:30 Hike Kato Pedina - Negrades: citizen science activity using AI tools for species recognition - Ecomuseum Zagori team

12:30-14:00 Lunch in Kalpaki village

14:30-18:00 Data and Machine Learning practical, Ecomuseum Zagori

- Citizen science data curation, Demo Echoloci - A. Talioura (1h15)
- Break - Bring your country's delicacy! (15 min)
- Machine Learning activity for plant identification - H.B. Turhan (1h)
- Data literacy aspects: guided data interpretation - Dr. A. Gioti (1h)

Day 3 - 20/05 : New digital tools for education

Morning & Afternoon - 7h30

@ Ioannina (JOIST Innovation Space, Mathematics Department, UoI)

09:30-12:00 STEM and IoT technologies for educational activities,

JOIST Innovation Space Ioannina (JISI)

- Demo & use: AR , Class VR, Lego, robots - A. Tiktapanidis (1h)
- Break (15 min)
- Demo of Arduino made by the Robotics team of the Vocational Training School Delta - C. Talari (30 min)
- Practical: Creation of a database for Arduinos - C. Talari (45min)

12:00-13:30 Lunch in Ioannina

14:00-19:00 IoT practical: How to set up a simple experiment for schools,

Mathematics Department Lab, Uoi

- Introduction to Python programming & Thonny IDE - Prof. C. Papadopoulos, (1h30)
- Break (15 min)
- IoT fundamentals, ESP8266 sensor interfacing and irrigation control - Dr. S. Kontogiannis (1h15)
- Break (15 min)
- Wi-Fi connectivity and telemetry transmission to ThingsBoard. Dashboard development and visualization - Dr. S. Kontogiannis (1h45)

Day 4 - 21/05 Pedagogical wrap-up

Morning & Afternoon - 6h

@EcoMuseum Zagori

09:00-12:00 Collaborative Design of LA activity

12:00 - 13:30 Cultural visit bridges of Zagori

13:30-15:00 Lunch in Kipoi village

15:30 - 17:30 Integrating AI & new technologies in education

- LA activity presentations (45 min)
- Break (15min)
- AI in education: Good practices and challenges - Dr. A. Gioti (30 min)
- New technologies in education: Discussion - P. Koutsoukou (30 min)

17:30 - 18:30 Closing

- Planning next activities - all partners (1h)
- Course evaluation feedback, Europass, Participation Certificates (45 min)