AISR LEARNING
B-STEM

STEAM
ERASMUS+

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TEACHER TRAINING IN IRELAND

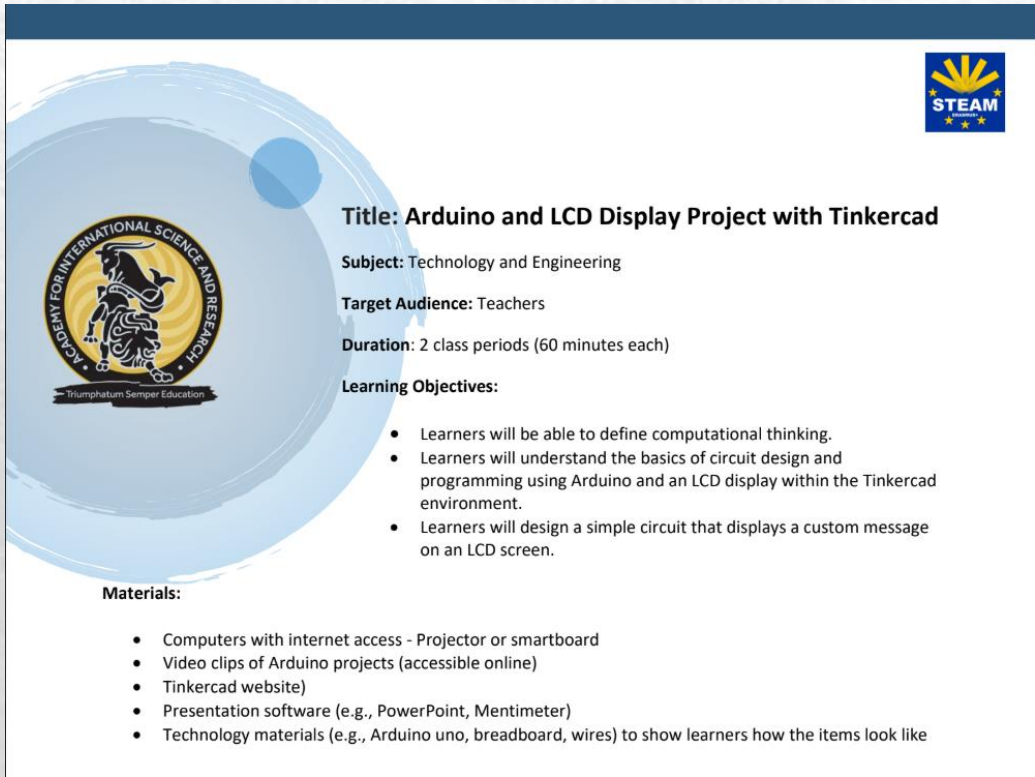
Academy for International Science and Research

Teacher Training Overview

- Minecraft for Language Learning
- STEAM Lesson Planning
- 2D Animation with Adobe Animate
- CLIL Methodology
- Computational Thinking

STEAM Lesson Planning (5E Model)

- 5E Model: Engage, Explore, Explain, Elaborate, Evaluate
- Interdisciplinary approach
- Hands-on investigations



Title: Arduino and LCD Display Project with Tinkercad

Subject: Technology and Engineering

Target Audience: Teachers

Duration: 2 class periods (60 minutes each)

Learning Objectives:

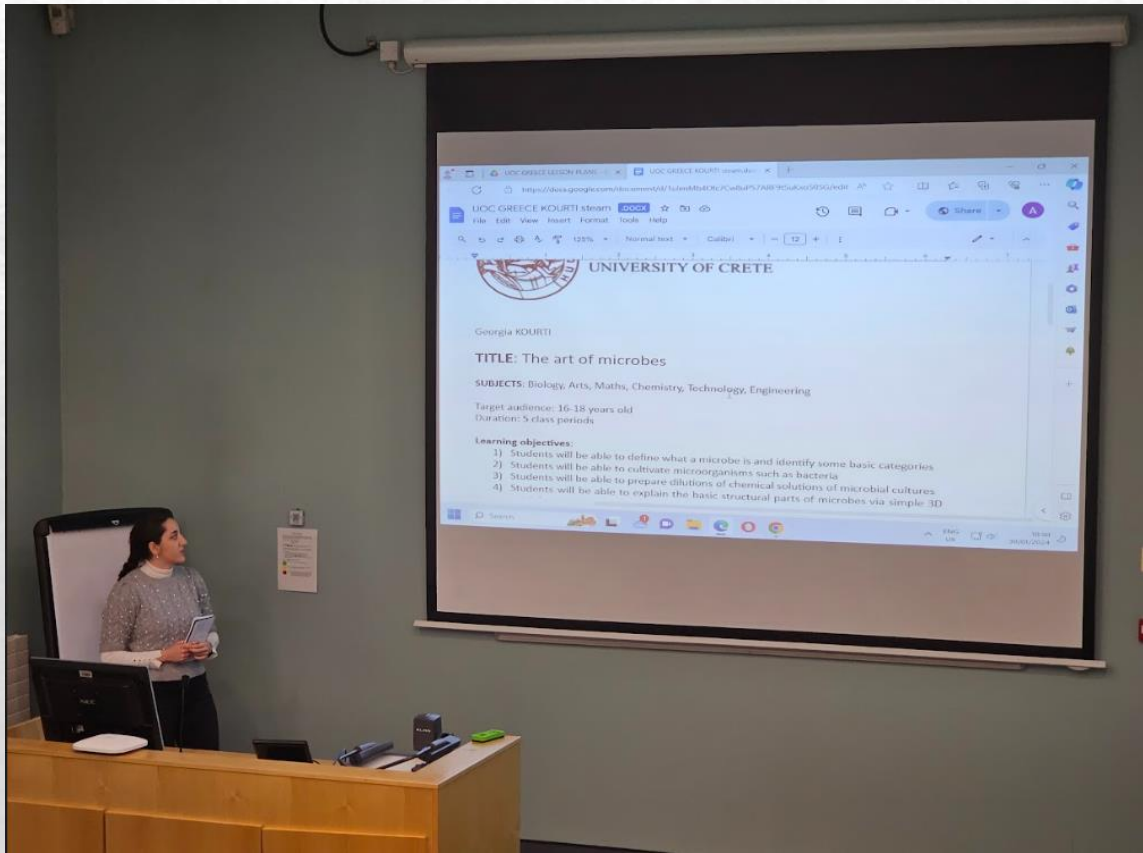
- Learners will be able to define computational thinking.
- Learners will understand the basics of circuit design and programming using Arduino and an LCD display within the Tinkercad environment.
- Learners will design a simple circuit that displays a custom message on an LCD screen.

Materials:

- Computers with internet access - Projector or smartboard
- Video clips of Arduino projects (accessible online)
- Tinkercad website)
- Presentation software (e.g., PowerPoint, Mentimeter)
- Technology materials (e.g., Arduino uno, breadboard, wires) to show learners how the items look like

Key Elements of STEAM Lesson Planning

- Clear Learning Objectives
- Real-world relevance
- Student-driven inquiry
- Assessment & Reflection

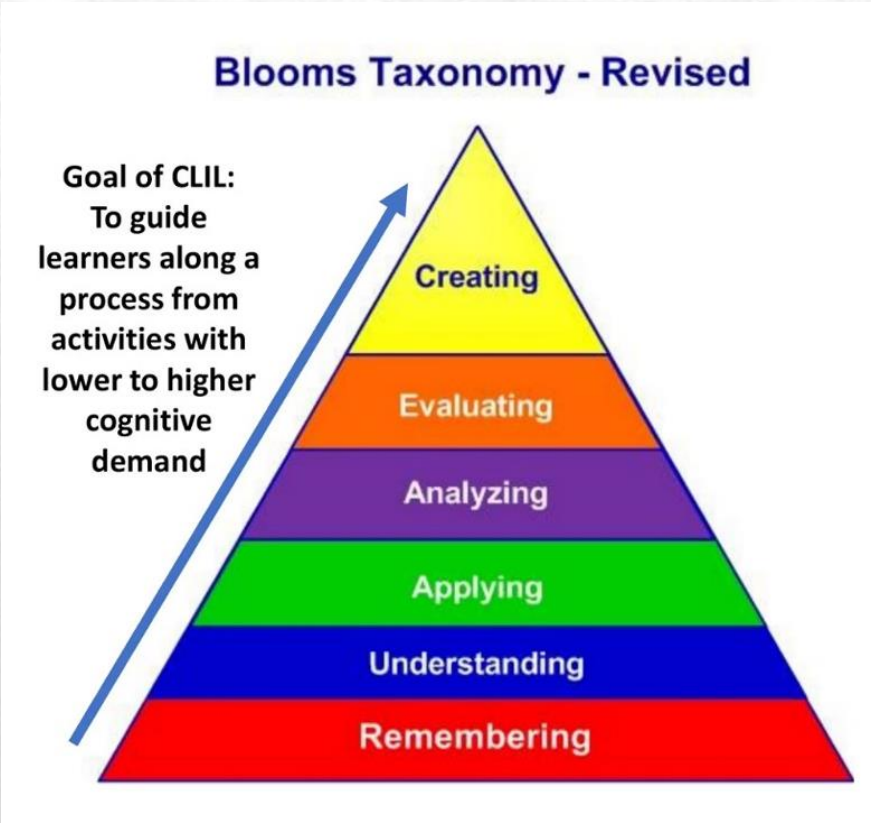


CLIL (Content and Language Integrated Learning)

- Teaching content subjects through English
- Dual focus: content & language outcomes
- Scaffolding language support
- Real-life language use

CLIL (Content and Language Integrated Learning)

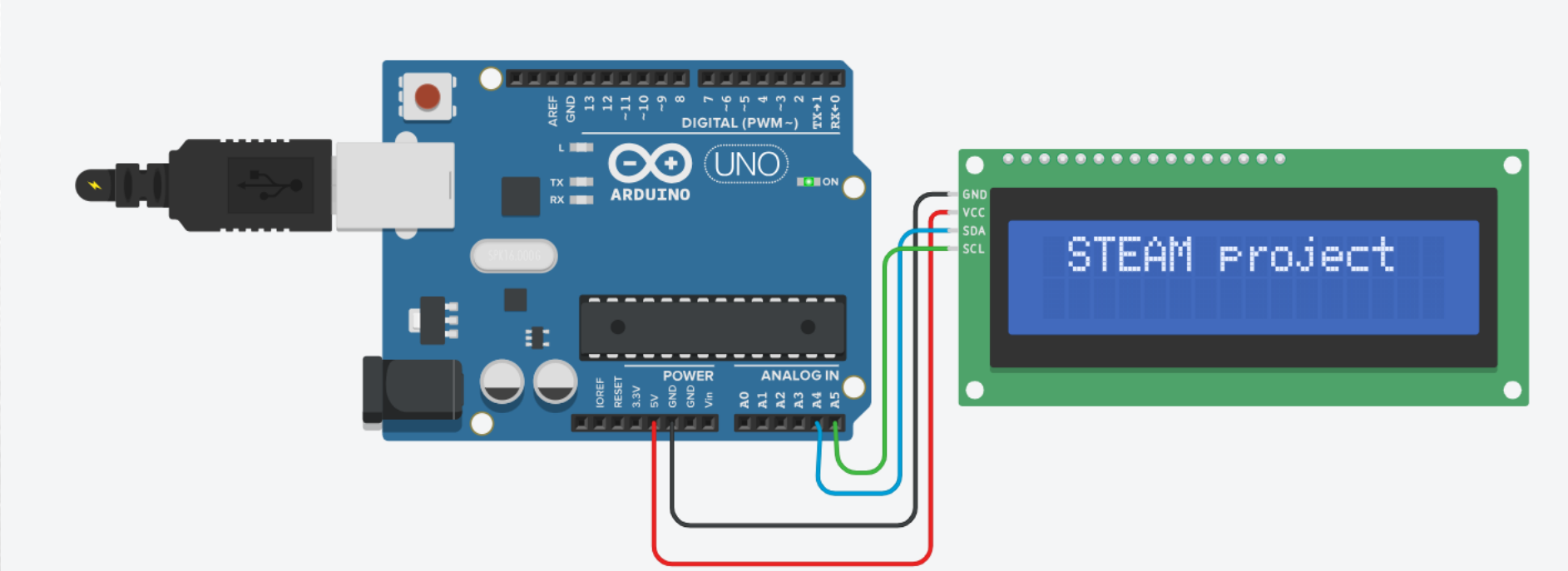
- Deeper understanding of language acquisition theories
- 4Cs of CLIL (Content, Communication, Cognition, and Culture)
- How to align lessons with Bloom's Taxonomy



Computational Thinking Workshop

- Logical reasoning & problem-solving
- Breaking problems into smaller parts
- Algorithms & patterns
- Hands-on coding activities in Tinkercad using Arduino uno board

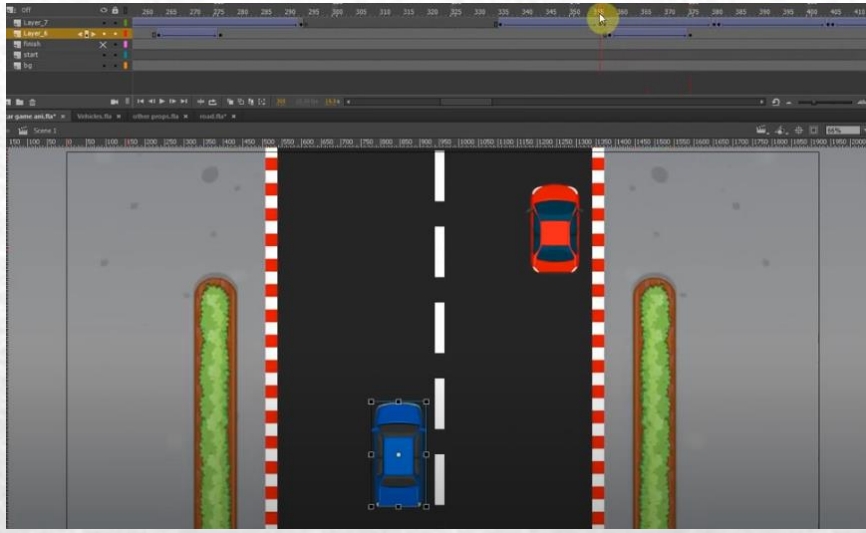
Computational Thinking Workshop



Applying Computational Thinking Across Subjects

- Maths: Pattern recognition
- Science: Hypothesis testing
- Art & Design: Algorithmic design
- Languages: Logical sequencing of ideas

Adobe Animate Workshop – Basic 2D Animation



- Introduction to Adobe Animate
- Basic principles of 2D animation
- Creating simple animations
- Linking animation to STEAM & storytelling

Animation in STEAM

- Combines science, technology, art & maths
- Computational thinking (timelines, frames)
- Visual storytelling & language development

Minecraft for Language Learning

- Using Minecraft Education Edition for language practice
- Collaboration, creativity, and problem-solving
- English Adventures with Cambridge
- Real-world language application

Key Benefits of Minecraft

- Promotes collaboration & communication
- Encourages creative problem-solving
- Contextual language use
- Engages students through play

Conclusion

- Innovative tools to engage students
- Combining creativity, technology, and language
- Empowering teachers with practical strategies

Thank You