

COMPUTATIONAL THINKING AND STEAM MADE EASY

Course Duration: one week, from Monday to Saturday, 30 hours

Number of Participants: Min. 6 – Max. 12

Course location: FLORENCE / FIRENZE (Italy)

Trainer: Claudia Baiata



COURSE DESCRIPTION

This is the perfect course for all of you that love playful, hands-on learning experiences on digital and unplugged technologies, gain a new vision on inclusive methodologies, design creative and fun

lesson plans that trigger problem solving abilities and have a low floor, high ceiling approach. We will discuss many practical aspects of the learning-teaching process that create those “Wow moments” so needed to inspire children’s natural curiosity and engage them to the STEM disciplines through coding and tinkering activities.

This course will offer teachers and educators awareness and insight on inclusive methodologies in technology, both plugged and unplugged, engaging and exciting for the whole classroom, in a constructivist perspective, with a specific angle on equity.

Visiting renowned museums, galleries, and cultural sites.

Reflecting on the cultural aspects that can be integrated into STEAM education.

Come and be a part of "Computational Thinking and STEAM Made Easy" in Florence, where you'll not only gain insights into cutting-edge educational concepts but also immerse yourself in the rich cultural heritage of this enchanting city. Join us for a week of professional development, collaboration, and cultural exploration!

LEARNING OUTCOMES

By the end of this course, participants will:

- **Gain a deep understanding of Computational Thinking concepts and their relevance to STEAM education.**
- **Explore hands-on strategies and activities to incorporate Computational Thinking into various subjects.**
- **Acquire valuable tools for promoting problem-solving, creativity, and critical thinking in the classroom.**
- **Develop a collaborative network of educators interested in STEAM and Computational Thinking.**
- **Receive a certificate of completion.**

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Day 1 - Monday

Introduction to Computational Thinking and STEAM:

- Welcome and course introduction. Icebreaker activities.
- What is Computational Thinking, and why is it important?
- Exploring the connections between Computational Thinking and STEAM.
- Storyboarding, group discussions and brainstorming.

Day 2 - Tuesday

Practical Applications of Computational Thinking:

- Hands-on activities to apply Computational Thinking concepts. Coding unplugged.
- Strategies for integrating Computational Thinking into different subjects.
- Group work and sharing best practices.

Day 3 - Wednesday

Coding and Robotics in STEAM Education:

- Introduction to coding and tinkering. The great pedagogical value of errors: element of growth and learning (teachers' mistakes included!)
- Practical sessions with coding platforms and tinkering.
- Designing STEAM projects using coding and tinkering.

PROGRAM

Day 4 - Thursday

Assessment and Curriculum Development:

- Digital wellness. Digital education, ethics and cybersecurity: digital natives or digital naïves?
- Inclusive methodologies and equitable learning.
- Sharing ideas with the group.
- Additional resources online.

Day 5 - Friday

Florence STEAM OUTDOOR:

- A city-wide treasure hunt (Peddy-paper) activity in Florence.
- Exploring the city's cultural and historical landmarks while completing challenges.

Day 6 - Saturday

Exploring Florence's Cultural Heritage