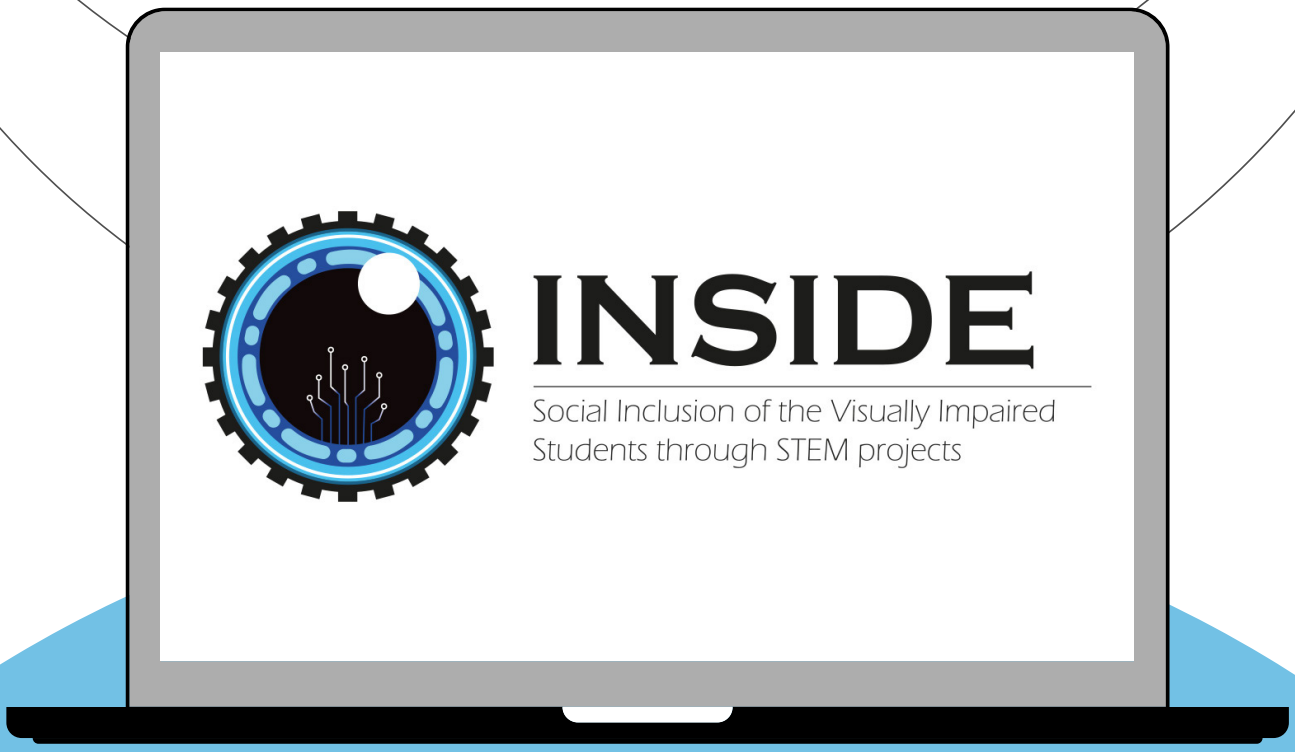
Erasmus+

AGENDA

Online 3D Printing Webinars for Inclusion Classroom

FOCUSING ON VISUAL IMPAIRMENTS



OCTOBER 2021 - MAY 2022

INSIDE
KA201-61C10070
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In the framework of the **Erasmus+ Project 'INSIDE'** the Consortium organises a series of Online Webinars, with title ***'Online 3D Printing Webinars for Inclusion Classroom,*** *focusing on Visual Impairments'.*

Phase	Webinar Number	Content	Studying hours
All Webinars will take place on Wednesdays at 17:30 – 19:00 CET (https://time.is/CET), at the specified dates, as mentioned in this table.			
1st phase (1st October 2021 – 9th February 2022)	1st Webinar 13th October	3D Printing basics: Basic principles, Materials (PLA, ABS, Carbon, PETG, Nylon, Flexible and more), methods (Material extrusion, photo Polymerazation, Powder Bed Fusion, Material Jetting, Binder Jetting), general applications and applications for people with Visual Impairments.	Webinar duration: 1 ½ hours Studying hours: 2 hours Quiz: 30 minutes max
	2nd Webinar 27th October	3D Printing hardware and types of 3D Printers for Material extrusion (FDM). Components of a typical FDM printer (Extruder, Hotend, nozzle, steppers, fans, bed, leveling sensor, other sensors etc.). Bed leveling manual or automatic. Different types of FDM printer (Cartesian or polar or Delta, open or with enclosure, dual filament etc.)	Webinar duration: 1 ½ hours Studying hours: 2 hours Quiz: 30 minutes max
	3rd Webinar 10th November	Tinkercad Design 1. Intro to Tinkercad interface. Create new design. The work plane of Tinkercad, coordinates, ruler and grid dimension. How to insert basic objects. How to duplicate and mirror objects. How to zoom, pan and rotate your viewscreen. How to save and open an existing file again.	Webinar duration: 1 ½ hours Studying hours: 2-3 hours Quiz: 30 minutes max
	4th Webinar 24th November	Tinkercad Design 2. The library of Tinkercad. Basic shapes, editing the dimensions and other characteristics. Hot to group & ungroup objects. Align objects. Working with the Work plane (create a new one, change the orientation and grid dimensions).	Webinar duration: 1 ½ hours Studying hours: 2-4 hours Quiz: 30 minutes max
	5th Webinar 15th December	Tinkercad Design 3. Using the ruler to place an object on the workplane. Designing complex objects by combining basic shapes. The shape generators sector in Tinkercad library. How to export the designed objects. File forms for exporting.	Webinar duration: 1 ½ hours Studying hours: 2-4 hours Quiz: 30 minutes max
	6th Webinar 12th January 2022	Slicing software part1: Basic Settings for slicing. Add & manage printers, add stl files & edit (move, scale, rotate, mirror), layer height & walls, bed & nozzle temperatures	Webinar duration: 1 ½ hours Studying hours: 3-4 hours

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		Slicing software: Ultimaker Cura	Quiz: 30 minutes max
	7th Webinar 26th January 2022	Slicing software part2: Basic Settings for slicing. Infill types and settings, Cooling settings, support settings, retraction, Speed, Adhesion settings, previes of slicing, edit starting and ending gcode. Slicing software: Prusa slicer	Webinar duration: 1 ½ hours Studying hours: 3-4 hours Quiz: 30 minutes max
	8th Webinar 9th February 2022	Designing a STEM project with 3D printing for VI students. Specific tools/software suitable for applications for people with Visual impairments. Specific requirements. How to design specific textures for 3d printed surfaces.	Webinar duration: 1 ½ hours Studying hours: 2-4 hours Quiz: 30 minutes max
Mid-term evaluation report		Trainers of the Webinar will fill a mid-term evaluation report for the progress of the participants.	
2nd phase (10th February 2022 – 18th May 2022)	9th Webinar 23rd February 2022	Presentation of the first 3 of the 6 STEM projects in total, prepared by Protoporia & e-Nable Greece	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz: 30 minutes max
	10th Webinar 9th March 2022	Presentation of the next 3 of the 6 STEM projects in total, prepared by Protoporia & e-Nable Greece	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz: 30 minutes max
	11th Webinar 23rd March 2022	Supporting participants during the pilot phase in their schools. Content will be adjusted based on the questions/needs of the participants during the previous session (10th Webinar). In particular e-Nable Greece trainers will focus on the guidance of participants to prepare their own 3D Printed STEM projects.	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz: 30 minutes max
	12th Webinar 6th April 2022	Supporting participants during the pilot phase in their schools. Content will be adjusted based on the questions/needs of the participants during the previous session (11th Webinar). In particular e-Nable Greece trainers will focus on the guidance of participants to prepare their own 3D Printed STEM projects.	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz: 30 minutes max
	13th Webinar 4th May 2022	Supporting participants during the pilot phase in their schools. Content will be adjusted based on the questions/needs of the participants during the previous session (12th Webinar). In particular e-Nable Greece trainers will focus on the guidance of	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz:

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		participants to prepare their own 3D Printed STEM projects.	30 minutes max
	14th Webinar 18th May 2022	Supporting participants during the pilot phase in their schools. Content will be adjusted based on the questions/needs of the participants during the previous session (13th Webinar). In particular e-Nable Greece trainers will focus on the guidance of participants to prepare their own 3D Printed STEM projects.	Webinar duration: 1 ½ hours Studying hours: 1-3 hours Quiz: 30 minutes max
Final evaluation report		Trainers of the Webinar will fill a final evaluation report for the progress of the participants.	
Webinar Platform		Zoom Links will be distributed accordingly based on the Webinars phases.	

IMPORTANT INFORMATION

- The Webinars will be held in **English** Language.
- For each session a **Webinar Educational Package will be delivered** to participants containing: the Webinar Script, the educational material (presentations, pdfs', videos, etc.) and quizzes for assessment.
- Each webinar will be **video recorded** and uploaded in the INSIDE website (https://insidestem.eu), after each session.
- At the end of each Webinar, the participants will complete an **online evaluation form** for the assessment of the implementation of the Webinar.
- In order to receive a Certification of Attendance the following criteria should be met:
  - Attending at least **10 of 14 in total webinars** and completing all the assignments during them.
  - Completion of Evaluation form at the end of each webinar (the evaluation concerns the implementation of the webinar and not your progress)
  - Apply one STEM project (you will need to provide by a ready lesson plan) in your school the period January-May 2022
  - Design a new STEM project in collaboration with other colleagues (you will need to provide by a Lesson Plan Template) based on your classroom needs.

by e-Nable Greece

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