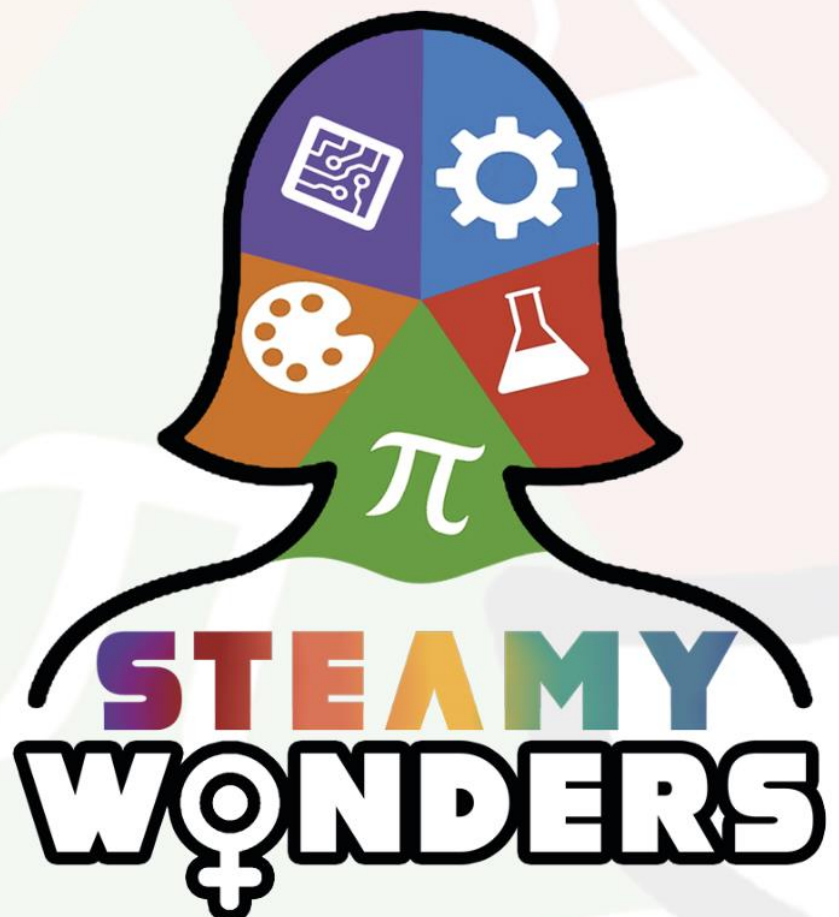


IO1 - Challenge-based Resources for Women in STEAM

Engineering
Tutor Handbook



STEAMY WONDERS Tutor Handbook – Engineering

The aim of this short handbook is to support you, as an experienced trainer or career advisor to use the STEAMY WONDERS Interactive Infographics with learners in your organisation. If you are currently working as a Learning and Development professional within a larger organisation or company, this handbook will help you to introduce the STEAMY WONDERS Interactive Infographics in your workplace. When developing these Interactive Infographics, the focus has been to support female learners considering a career in STEAM, to build their confidence and skills so that they can plan successful careers in the STEAM sectors.

7 European partners have developed five Interactive Infographics for each STEAM subject:

- ✓ Science
- ✓ Technology
- ✓ Engineering
- ✓ Arts
- ✓ Mathematics

Each of the Interactive Infographics also address the following themes:

- ✓ Motivation
- ✓ Confidence
- ✓ Career planning
- ✓ Personal resilience
- ✓ Career management

Through the STEAMY WONDERS project, we have developed a suite of 35 Interactive Infographics – to support women to develop their careers in STEAM.

This handbook will help you to use one of these Interactive Infographics in your work with women. In this short handbook, you will be introduced to what an interactive infographic is, a little about the topic that is being addressed in this Interactive Infographic and you will then



gain an insight into the activities that are embedded in this Infographic and some guidance on how they can be used best in a group of learners.

This short handbook addresses an Interactive Infographic developed to support female learners to develop their skills and competences in relation to: **engineering**.

What is an Interactive Infographic?

An Interactive Infographic is an engaging educational experience for learners. The Infographics consist of learning materials that engage the user to “interact” with information. The STEAMY WONDERS Interactive Infographics are comprised of digital resources that are embedded into the Infographic poster through the use of QR codes. If you click on the QR codes in this Infographic, you will find a range of digital learning materials including educational videos, online magazine articles, online educational escape rooms, digital breakouts, games, quizzes, WebQuests. In this way, a simple poster can be brought to life and turned into an educational resource that you can use with young employees or with VET learners.

Through using an Interactive Infographic, you can ensure that female learners considering a career in the STEAM sectors can engage with education materials at a time that suits them – perhaps on a coffee break, or when waiting for a meeting or class to start – wherever the learner can view the Infographic, they can access the learning materials embedded in it. It is for this reason that it is important that the Infographics are displayed in locations that are accessible for female learners. To effectively use the Infographic, we would suggest that you print it out and display it in the hallways and canteen of your workplace, where employees and learners will have the opportunity to engage with the learning materials. In addition, we would suggest that you display these Infographics on community noticeboards, in community centres, libraries and other information hubs in your community, where learners can access the digital learning content embedded in the poster.

The Infographics can also be used in a facilitated session through classroom-based learning. We will discuss this use for the Infographics in this handbook.



Introduction to the topic

This interactive infographic focuses on the area of **engineering**. It aims to encourage female participation in engineering careers. The infographic offers an insight into this field and gives real-life advice on how young female learners can enhance their knowledge on this topic. This works to encourage learners to be inspired by successful women in this sector and help them to build their resilience skills.

What will learners achieve?

On successful completion of the learning resources embedded in the STEAMY Wonder Interactive Infographics, female learners will have attained the following:

Knowledge	Skills	Attitudes
<ul style="list-style-type: none"> • Factual knowledge of available career pathways into Engineering careers. • Factual knowledge of national and European career options in Engineering. • Factual knowledge of national and EU programmes for women in Engineering roles. • Theoretical knowledge of personal attributes required for career success in this sector. 	<ul style="list-style-type: none"> • Discuss career options in the Engineering sector. • Self-evaluate personal suitability to careers in this sector. • Self-assess skill deficits for a successful career in Engineering. • Develop an education and career plan for success in the Science sector. • Discuss different careers within Engineering – Civil, Structural, etc. • Research successful female role models in Engineering. 	<ul style="list-style-type: none"> • Willingness to assess one's own motivation to pursue a career in Engineering. • Awareness of the important role that women play in Engineering. • Openness to exploring career options in Engineering. • Willingness to share what has been learned with other female professionals in a network. • Openness to engaging in female networks in the Engineering sector.



	<ul style="list-style-type: none">• Solve challenges to build resilience when planning a career in Engineering.	<ul style="list-style-type: none">• Willingness to self-evaluate to identify skills and attributes needed to succeed in Engineering careers.
--	---	--

How should you proceed in teaching?

The educational resources of the STEAMY-WONDERS project have been created with the aim of providing teachers with flexible and widely applicable educational tools. You can use educational resources (videos, quizzes, Digital Breakouts, WebQuests) both in classroom teaching and blended learning and self-study. We wish you much success in teaching and using the Steamy Wonders educational resources.

