



“Opening Schools to STEM Careers” MOOC for Heads of Schools and CareerCounsellors

Final activity



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STEM career School Plan

As a final course activity, we want to encourage you to apply the ideas learned during the “Opening Schools to STEM Careers” MOOC, to create an **outline for a STEM careers School Plan**. The objective is for you to put in practice your STEM careers knowledge while developing a set of ideas/plan for activities that you could implement in your school.

Instructions

In the following template, you will find a number of areas you should consider when doing this kind of audit. Bear in mind that the situation of each school is different. For this reason, most of the questions are quite open. We want you to be imaginative, to think outside the box!

Before you start, we advise you to pay attention to the following instructions:

- Read the entire document before starting to fill it in.
- The document has three (3) sections in total: the first one is an optional self-assessment survey; the two other sections have multiple questions, so make sure you scroll down to see all of them.
- Each question already contains an answer, as an example, to help you develop your own ideas.
- Some of the questions are marked as optional. Those questions will have an [OPTIONAL] mark next to them. Please make sure you respond to the mandatory questions.

1. Identify where your school stands regarding each of the following school practice criteria (A-H). [OPTIONAL]

In the table below, you will be able to self-assess the situation of your own school regarding the following eight (8) criteria.

- A. Teachers and school educators (including heads of school and career counsellors) awareness of current STEM jobs and of the different career pathways to reach them.
- B. Multi-stakeholders discussions within the school in order to promote STEM career awareness at school level.
- C. Creation and usage of external partnerships to promote STEM subject choices and careers.
- D. Promotion of gender equity at school level.
- E. Organization of career orientation events to promote STEM careers.
- F. Integration of the concept of mentorship in schools.
- G. Communication about school-to-work programs and guidance of the students towards these programs.
- H. Leadership in career orientation on STEM education.

Using the table will help you in the following sections of this activity, where you will have to investigate what changes and resources are needed to improve STEM career awareness strategies at school level.

	Level 1: None or almost inexistent knowledge nor application in the school	Level 2: Basic knowledge and application in the school	Level 3: Excellent application at the school level	Not applicable	Comment (Optional)
<p>A. Teachers and school educators (including heads of school and career counsellor) awareness of the current STEM jobs and on the different career pathways to reach them. E.g., Teachers and school educators regularly organize talks with STEM professionals, during which these professionals inform students about the internship and apprentices opportunities from the company where he/she works</p>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	
<p>B. Multi-stakeholder discussions within the school in order to promote STEM career awareness at the School level. E.g., regular meetings are organized between teachers, heads of schools and career counsellors to organize common STEM career</p>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	

awareness activities					
C. Creation and usage of external partnerships to promote STEM subject choices and careers. E.g., Parents, community members, employers, outside experts etc. Parents are involved by inviting them to give a guest lecture.	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	
D. Promotion of gender equity at school level. E.g., <ul style="list-style-type: none"> • If group activities are developed, boys and girls are distributed equally • Gender sensitive supporting documents are used • Female role models are invited to classrooms 	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	
E. Organization of career orientation events to promote STEM careers. E.g., <ul style="list-style-type: none"> • Science and Technology Career Fairs/Meetups • Career Talks • Career Exhibitions • Workshop 	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	
F. Integration of the concept of mentorship in schools. E.g., Students have different opportunities of mentorship where they can discuss directly with different STEM professionals.	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	

<p>G. Communication about school to work programs and guidance of the students towards these programs. E.g., Networking with researchers is enhanced during workshops on astronomy exploration. In particular, at the end of the activity, students are able to ask questions to the researcher, specifically about his/her professional activity and everyday work tasks.</p>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	
<p>H. Leadership in career orientation in STEM education. E.g., My school has already a STEM strategy at the school level and regular meetings are organized in order to discuss results and adapt it.</p>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	

2. Can you identify the changes needed to improve the situation of your school to the next level?

Changes needed to improve the situation for each of the elements listed below:	
<p>A. Teachers and school educators (including head of school and career counsellor) awareness of the current STEM jobs and on the different career pathways to reach them (Modules 1 and 2)</p>	<p>2.1 The pupils who are attending our school are involved in school guidance activities. Most part of this kind of activities is dedicated to let the students choose the next secondary school.</p>
<p>B. Multi-stakeholder discussions within the school in order to promote STEM career awareness at school level (Modules 3 and 4)</p>	<p>2.2 We had had some workshops with STEM experts, for instance we met robotics, geologists and ICT educators. https://www.youtube.com/watch?v=b8t8bYwiQhI&feature=youtu.be</p> 
<p>C. Creation and usage of external partnerships to promote STEM subject choices and careers (Module 5)</p>	<p>2.3 Parents are involved by inviting them to give a guest lecture as you can see here http://www.descrittiva.it/calip/1314/2013-14microscopio.pdf</p> 

<p>D. Promotion of gender equity at school level (Module 4)</p>	<p>2.4 Female role models are invited to classrooms, especially in ICT and robotics field. Our school was involved in some gender equity projects.</p> 
<p>E. Organization of career orientation events to promote STEM careers (Module 7)</p>	<p>2.5 Here you can see our organization:</p> <ul style="list-style-type: none"> • Science and Technology Career Fairs/Meetups • Career Talks • Career Exhibitions Workshops • https://www.youtube.com/watch?v=jc2x-44eoOo&list=UUfEVKRBmFFBkj3pyp_85vIQ 
<p>F. Integration of the concept of mentorship in schools (Module 5)</p>	<p>2.6 Students have few opportunities of mentorship where they can discuss directly with different STEM professionals. We have to broaden the approach.</p>

<p>G. Communication about school to work programs and guidance of the students towards these programs (Module 6)</p>	<p>2.7 We stay in touch with some University of Urbino researchers on code topic after some workshops. In particular, at the end of the activity, students are able to ask questions to the researcher, specifically about his/her everyday work.</p>
<p>H. Leadership in career orientation on STEM education. (Module 3)</p>	<p>2.8 My school has already a STEM strategy at the school level and some meetings are organized in order to discuss results and adapt it. We have not a special role.</p>

3. Can you identify the mechanisms or interventions to help you achieve change? You can also include resources and sources of support to make the transition.

This information can be **intangible** (such as information about local and regional employers, experiences about how to use STEM skills in real life activities, etc.) but it can also **tangible** (university brochures, leaflets about internships, biographical/professional information about a presenter, content plan to develop a workshop, etc.).

Identify the mechanisms or interventions to help you achieve (1) the changes you described in Section 2 and (2) your STEM career learning strategy at the school level (for each of the elements listed below):	
A. Teachers and school educators (including heads of school and career counsellor) awareness of the current STEM jobs and the different career pathways to reach them	3.1 At our school level, Teachers and school educators are mainly aware of different approaches the secondary school have on the topic.
B. Multi-stakeholder discussions within the school in order to promote STEM career awareness at the School level	3.2 We have to promote more stakeholder relations in order to develop discussions about STEM career awareness at the School level.
C. Creation and usage of external partnerships to promote STEM subject choices and careers	3.3 Our school has to create more external partnerships to promote STEM subject choices and careers, especially in our geographical area.
D. Promotion of gender equity at the school level	3.4 We have to promote different games and roles, more careful of gender equity. We have to teach thinking on the female point of view about the topics.
E. Organization of career orientation events to promote STEM careers	3.5 The organization of career orientation could start at our school level.
F. Integration of the concept of mentorship in schools	3.6 We have to create special roles to integrate the concept of mentorship in our school.
G. Communication about school to work programs and guidance of students towards these programs	3.7 We need a special ministry of education effort to guide teachers and students.

I. Leadership in career orientation on STEM education

3.8 I think we need share and clear strategies about career orientation to guide the choices of our students.

