**STE(A)M IT STORIES OF IMPLEMENTATION**

**Title of your Story**

| Implementation of the Learning Scenario: “Together we can make a difference” |

**Name of the Author(s)**

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**The Learning Scenario Implemented**

<table>
<thead>
<tr>
<th>Add below the link to the learning scenario you implemented in your class. The link must directly point to the resources on Scientix Repository and STE(A)M IT Website.</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.scientix.eu/resources/details?resourceId=28394">http://www.scientix.eu/resources/details?resourceId=28394</a></td>
</tr>
<tr>
<td><a href="http://steamit.eun.org/together-we-can-make-a-difference-environment/">http://steamit.eun.org/together-we-can-make-a-difference-environment/</a></td>
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</tbody>
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**The Implementation Context**

<table>
<thead>
<tr>
<th>Briefly describe the context of your implementation, specifying what subject(s) you chose to implement the learning scenario in, how those subjects relate to STEM careers, what was the students’ age(s), the size of the group, previous familiarity with real life scenarios, what real-life questions did you choose to address, etc. We aim to gather stories of classroom implementation, so the context must appropriately reflect this. (maximum 300 words).</th>
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<tbody>
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<td>I realized early on that it would be a challenge for me to implement the specific Learning Scenario in my classroom, although it is very interesting, as it concerns the topic of environmental pollution, a major and relevant contemporary problem affecting us all equally. So, after a first reading, I tried to adapt it considering the learning needs and level of my students in order to be effective. I didn’t include the mathematics lesson of the learning scenario in my implementation and I adjusted the team activities of the lesson 4 (Science) and lesson 6 (Art) modifying them into activities where students could work individually due to the Covid pandemic restrictions. After these changes were adapted, the learning scenario became shorter (five lessons instead of six) and more usable. Its learning value didn’t decrease, the emphasis was given to the environmental side of the learning scenario and to the way that this side could be understood from the students as was shown from their learning products from the Language and Art lessons. Therefore,</td>
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the children were considered about STEM careers that related to the environment and its protection.

The lesson was implemented in a fifth-grade class with 24 eleven-year-old students, in primary school in Limassol. They were familiar with real life scenarios as they were experienced with the implementation of our own scenario (STE(A)M IT primary school teacher team), so they participated, and they were excited.

The real-life questions of the learning scenario were well-aimed, so students could give answers to them:

1. What does the future look like for people living on Earth if we continue to treat our planet the way that we do?
2. How will climate changes and energy consumption have an impact on environment, ecosystem?
3. How does a polluted environment affect our health?
4. How Earth could be a better place and what are some wrongdoings we need to correct?

The Narrative

**What did you do?** Describe how you used the selected learning scenario in your teaching. For example, what was the structure of the lesson activities; did you make any adaptations to the resources? Did you include any online activities in the implementation? (maximum 200 words).
I tried to follow the learning scenario as more faithfully as I could. The beginning was exceptional, a brainstorming around the phrase “Earth does not belong to us. We belong to the Earth.” The students’ answers were very good. We completed the brainstorming on the whiteboard with different colors of markers and in their textbooks.

The discussion and preparation for the next lesson left the students with the agony of what is going to happen next and their interest for the lesson in high levels.

For the 2nd lesson (Language), the students would write an essay outlining their thoughts for the theme: “Consider what your country will be like in the future (30 years from now). Think about pollution, environment, climate change, energy, education, careers and jobs”. We had a discussion before, and students did their preparation individually. We decided to deal with Limassol, the city that we live. They stand mostly at the keywords of the title but also consider what environmentally friendly activities are happening in our city and what others would happen, but they didn’t, what could we correct and how, how could Limassol be a better place for someone to live.

Perfect essays, excellent thoughts and ideas, students liked the theme and activities.

For the 3rd lesson (Natural Sciences), some changes were adapted. The students watch the videos first, have a discussion in class sharing thoughts, ideas, impressions and then were given instructions and started to work on the two posters that the learning scenario
is suggesting. The first one is a poster with eco messages and the other is a poster with solutions (how to save the future of the environment of their city and World in general and make a better future for people). We also change the way that students would work for the posters. Due to Covid pandemic, students can work individually and not in groups! So, everyone works by himself, for the two posters, contributing with his/her own eco message and solution in the class posters.

For the 4th lesson (Physics), we followed the lesson plan. At the end of the lesson, the students make an Energy action plan: 10 easy ways to save energy.
There wasn’t an implementation of the 5\textsuperscript{th} lesson (Mathematics), after the adaptations on the initial learning scenario. Students enjoyed the 6\textsuperscript{th} lesson (Art), as this is shown from their drawings. Their task was to draw two pictures: (1) Their city in 30 years depicting how it will look like if people don’t care of it, won’t be environmentally conscious and (2) Their city in 30 years if people will take care of it, be environmentally conscious, follow energy plans etc. They agreed to have the drawings in the same piece of paper in order to show the difference more.
The Collaboration Process

_How did the collaboration with other teachers go?_ Please, describe how was working together with the other teachers and what was the approach to carry out the lesson(s). (maximum 150 words).

In primary school, the teacher can teach all the subjects. This advantage made our life easier keeping in mind that the teachers participating in our team are not working in the same school but in three different schools. Due to the restrictions in transportations because of the Covid-19 pandemic, the implementation of the learning scenario took place only in one of the schools by one teacher.

Learning Outcomes

_What did you achieve?_ Describe the main learning outcomes you achieved with the implementation of the Learning Scenario. Tell your reader about anything that supports your case for achieving these learning outcomes. For example, students’ view, or any other evidence\(^1\) that illustrates the benefits and impact of using this Learning Scenario? (maximum 300 words)

With the implementation of the learning scenario, students manage to visualize their world, their city with the existence of environmentally friendly plans or not, so they could

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\(^1\) Remember to refer to the point 6 of the guidelines.
make decisions and choose what would be the best future for them and what they could do now to achieve it. They learn that with a few simple everyday routine activities, and adaptations in their daily lives, they can have a healthy environment in the long term for themselves and their families. The beginning of the scenario made them to consider because we always think that we, the people, can control the world as we want, with no damage and with no one to control us. The thesis that we belong somewhere, we depend on something, is a thesis that could be acceptable from the children to think of, consider of and adjust it in order to find solutions that they can adopt in their daily lives. So, the success of the beginning and structure of the lesson was a big advantage to the success of the aims of the lesson.

Teaching Outcomes

What did you, as a teacher, get out of teaching with a STE(A)M IT Learning Scenario and resources? How did the usage of the STE(A)M IT Learning Scenario go? What should teachers and students watch out for to make effective use of a Learning Scenario created to support the integrated STEM approach? Please also describe your experience in collaborating with teachers of other subjects. What was different from traditional teaching? What advice would you give to another teacher planning to implement the same Learning Scenario about the achievement of the desired learning outcomes? (maximum 300 words).

It is a challenging, educational and beneficial experience to teach with a STE(A)M IT Learning Scenario and resources. The LS implementation went extremely well. Students and I were familiar to the way that we would work because of the experience of teaching of our LS (Cyprus team LS) before. This different way of teaching seems that it works effectively with the students who they participate to the lessons in a major level.

To make effective use of a learning scenario created to support the integrated STEM approach, teachers should be organised and prepared for the teaching of every lesson included (lesson plan, materials, computers or tablets if needed, check the related sites before the lesson and the internet sources if they work, have in mind possible questions that students may apply, possible difficulties and ways to solve them.) Students also have to be ready in a similar way (textbooks, worksheets, pencils, etc) so they can participate and react to the lesson’s activities.

The advice I would like to give to another teacher planning to implement the same Learning Scenario about the achievement of the desired learning outcomes, is to go for it! It’s a unique experience for a teacher and something that he/she is maybe searching to try in his/her lesson out of the daily routine.
## Challenges

**Did you face many challenges? If yes, how did you address them? Tell us more about your implementation issues, obstacles (practical or in relation to your school’s organization/resources/environment), communication and planning issues, lack of knowledge, attitude towards STEM, etc. What did you do to overcome these challenges? (max. 200 words)**

Surely there were challenges implementing the learning scenario. Firstly, this was an original learning scenario created by another team and I had to adjust it before implementing it in my class. The LS concerned students of different age, it was based on an other country’s curriculum and educational characteristics and some adjustments were necessary to ensure we could use the LS in our class. Secondly, there were the restrictions for the protection from Covid. The students couldn’t work in groups, had to keep distances between them during lesson time and couldn’t share any materials. Lastly, we couldn’t implement the activities that were meant to take place in the school garden due to the small size of the garden and the high weather temperatures in April when the implementation took place. 

Beside these, the improvement in students’ attitudes towards STEM was more than noticeable as well as the improvement of the lack of knowledge for the creation of new attitudes and strategies in problem solving and facing difficulties.

Thank you!