

STE(A)MIT

(ΜΙΑ ΔΙΑΘΕΜΑΤΙΚΗ/ΔΙΕΠΙΣΤΗΜΟΝΙΚΗ ΠΡΟΣΕΓΓΙΣΗ ΤΩΝ ΜΑΘΗΜΑΤΩΝ STEM)

Από την Ζωή Κοφινά Μιχαήλ
(Εκπαιδευτικό Δημοτικής Εκπαίδευσης)



ΒΑΣΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

ΒΑΣΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ



- Ο όρος **STEM** (Science, Technology, Engineering and Mathematics) χρησιμοποιείται με διάφορους τρόπους στην εκπαίδευση.
- Από ένα απλό ακρωνύμιο αναφερόμενο στις τέσσερις διαφορετικές γνωστικές περιοχές, σε ένα τρόπο ο οποίος υποδεικνύει πως αυτές οι γνωστικές περιοχές έχουν κοινούς στόχους, μεθοδολογίες και προβλήματα (π.χ. η μείωση των μαθητών που ασχολούνται με θέματα και επαγγέλματα STEM).

- Πρόσφατα ο όρος STEM έχει διευρυνθεί για να περιλάβει το **A**, που αντιπροσωπεύει τις τέχνες (ζωγραφική, θέατρο) ως ένα τρόπο που να τονίζει τη σπουδαιότητα της δημιουργικότητας στην εκπαίδευση STEM, ή ακόμα με το **A** να αναφέρεται στη λέξη «**όλα**» (**All**), τονίζοντας τη σημασία της σύνδεσης των STEM με άλλες γνωστικές περιοχές.



ΒΑΣΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

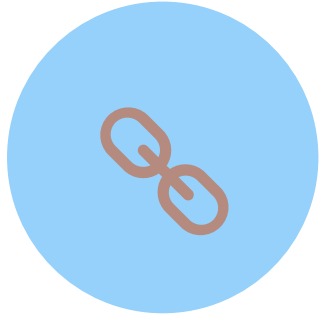
- Στη δευτεροβάθμια εκπαίδευση οι γνωστικές περιοχές του STEM συνεχίζουν να διδάσκονται απομονωμένα. Υπάρχουν οι **Φυσικές Επιστήμες (S)**, η **Τεχνολογία (T)**, η **Μηχανική (E)** και τα **Μαθηματικά (M)**. Ακόμα και το μάθημα των Φυσικών Επιστημών δεν είναι ενιαίο : υπάρχει η Φυσική, η Χημεία, η Βιολογία.
- Για να μπορέσουν οι μαθητές να αντιληφθούν το ενδιαφέρον των **STEM** (γνωστικών περιοχών και επαγγελμάτων) και ακόμα κυριότερα να κατανοήσουν τόσο οι μαθητές όσο και η κοινωνία γενικότερα τον βασικό ρόλο που μπορούν να διαδραματίσουν τα STEM στη βελτίωση της ζωής μας και την αναγκαιότητα τους για το μέλλον, χρειαζόμαστε τα **STEM να διδάσκονται σε ενιαίο πλαίσιο** (integrated way).



Να εντοπίσει και συμπληρώσει την έλλειψη ενιαίου Πλαισίου για κοινή διδασκαλία Θετικών Επιστημών σε Ευρωπαϊκό επίπεδο



Να ενθαρρύνει εκπαιδευτικούς να ερευνησουν και να υιοθετήσουν δραστηριότητες που αναγκάζουν τους μαθητές να σκεφτούν έξω από τα καθορισμένα όρια των βιβλίων



Σύνδεση Θετικών Επιστημών με αντίστοιχα επαγγέλματα



Η προσέλκυση μαθητών σε σπουδές Θετικών Επιστημών σε ανώτερο επίπεδο

ΟΙ ΣΚΟΠΟΙ ΤΟΥ PROJECT ΚΑΙ Η ΣΥΝΔΕΣΗ ΜΕ ΤΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΣΕΝΑΡΙΟ

ΕΝΙΑΙΟ ΠΛΑΙΣΙΟ STE(A)M IT

- Χρειαζόμαστε όλα τα συστατικά του S να συνεργάζονται. Όλα τα γράμματα στο STEM να **συνεργάζονται**. Και ακόμη καλύτερα όλα τα μαθήματα να συνεργάζονται STE(A)M. Χρειάζεται να ορίσουμε όρια στο να διδάξουμε τις διαφορετικές γνωστικές περιοχές σε ένα ενιαίο πλαίσιο συνδεδεμένο πραγματικά ζητήματα καθημερινότητας.
- We need “to steam education”.
- Εάν καταφέρουμε να εφαρμόσουμε το πλαίσιο “STE(A)M IT”, μπορούμε να διαβεβαιώσουμε πως οι μελλοντικοί πολίτες θα είναι **έτοιμοι διαχειριστούν οποιαδήποτε προβλήματα** στην καθημερινότητα τους με ένα συλλογικό, κριτικό και ικανοποιητικό τρόπο.
- Για να το επιτύχει αυτό, το **STE(A)M IT project** στοχεύει να (1) δημιουργήσει και εφαρμόσει ένα **εννοιολογικό πλαίσιο αναφοράς** για ενοποιημένη εκπαίδευση STE(A)M, (2) **αναπτύξει ένα αρχείο** για δασκάλους δημοτικής εκπαίδευσης και εκπαιδευτικούς, βασισμένο σε αυτό το πλαίσιο με **ειδική στόχευση στο περιεχόμενο of STEM teaching**, ειδικά μέσα από τη συνεργασία βιομηχανιών-εκπαίδευσης, και (3) περαιτέρω να διαβεβαιώσει το περιεχόμενο της **ενοποίησης** των STEM teaching εγκαθιδρύοντας ένα δίκτυο από συμβούλους καθοδήγησης και σύμβουλους καριέρας στα σχολεία προωθώντας την προσέλκυση των STEM jobs στις τάξεις τους.

ΓΙΑ ΤΟ STE(A)M IT

- Το STE(A)M IT project ξεκίνησε το 2019 και θα τελειώσει το 2022. Χρηματοδοτείται από το Erasmus+.
- **Coordinator:** European Schoolnet, <http://europeanschoolnet.org> (Βελγιο)
- Συμμετέχουν:
 - [Istituto Nazionale di Documentazione, Innovazione e Ricerca, Italy](#)
 - [Italian University Line, Italy](#)
 - [Ministry Of Science And Education Of The Republic Of Croatia, Croatia](#)
 - [Ministério da Educação – Direção-Geral da Educação \(DGE\), Portugal](#)
 - [University Of Cyprus, Cyprus](#)
- Ιστοσελίδα STEAMIT (LS STE(A)M IT)
- <http://steamit.eun.org/>
- Και στη σελίδα του Scientix
- <http://www.scientix.eu/web/guest/projects/project-detail?articleId=884972>

ΜΑΘΗΣΙΑΚΟ ΣΕΝΑΡΙΟ STE(A)M IT

Η ΛΟΓΙΚΗ, Ο ΣΧΕΔΙΑΣΜΟΣ ΚΑΙ Η ΕΦΑΡΜΟΓΗ

Η ΚΥΡΙΑ ΙΔΕΑ ΤΟΥ ΔΙΔΑΚΤΙΚΟΥ ΣΕΝΑΡΙΟΥ

- Το project απευθύνεται σε **δασκάλους, μαθητές, policy makers** (υπεύθυνους σχεδιασμού και εφαρμογής εκπαιδευτικών προγραμμάτων), **σύμβουλους επαγγελματικού προσανατολισμού και εκπροσώπους βιομηχανιών και εταιρειών**
- Κάθε τομέας έχει σχεδιαστεί έτσι ώστε να εξηγεί και συμπεριλαμβάνει:
 - **Διαθεματική διδασκαλία**
 - Σύνδεση **θετικών** επιστημών με αντίστοιχα **επαγγέλματα**
 - Διευκόλυνση **πρακτικών** και **ομαδικών** δραστηριοτήτων

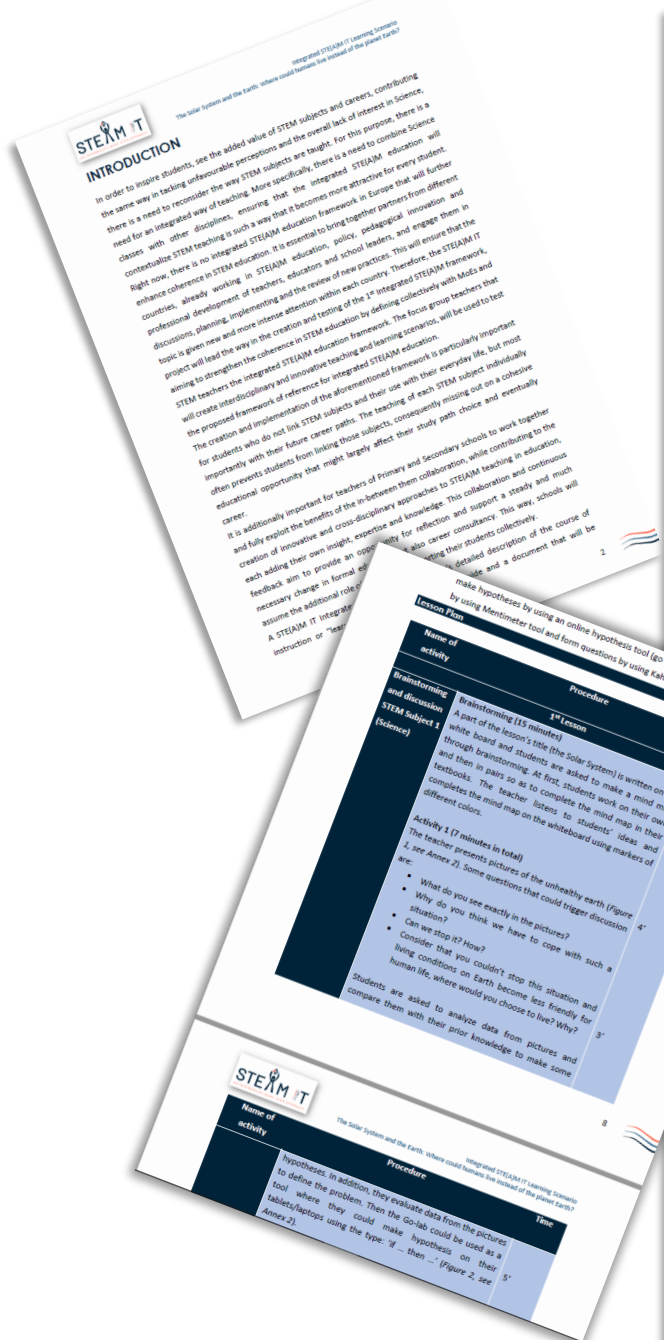
THE TEMPLATE HAS SIMILARITIES AND DIFFERENCES WITH ORDINARY LS TEMPLATES

Ομοιότητες

- Σκοποί
- Μαθήματα
- Υλικά και δραστηριότητες που χρησιμοποιήθηκαν

Διαφορές

- Σύνδεση με επαγγέλματα
- Εντυπώσεις και γνώμη μαθητών
- Learning products (αποτελέσματα δραστηριοτήτων πέρα από το τεστ αξιολόγησης)
- Αριθμός και επιλογή μαθημάτων
- Τομέας παραπομπής για τα συμπληρωματικά υλικά (Annex)



continuously improved and updated. Each lesson needs to combine three subjects, two of the subjects must be STEM and the third subject can be either STEM or non-STEM. is about designing educational activities that facilitate deep learning to enhance 21st century skills such as critical thinking, collaboration, communication and creativity and divergent thinking. Designing a path based on methodologies such as Problem, Project and Challenged Based learning allow to incorporate problem-solving, inquiry and design based learning into the teaching activity taking care of real challenges in an authentic context, that of our world.

With this in mind, an integrated STEM approach will develop capable citizens who personally and professionally make informed decisions in their daily lives and have the power to follow STEM careers and guide innovation at any age.

Title

The Solar System and the Earth: Where could humans live instead of the planet Earth?

Authors

Zoe Kofina Michael
Paraskevi Sophocleous
Floria Valanidou

Summary

The present lesson scenario (LS) students are involved in inquiry-based learning. They will be given the opportunity to analyze and evaluate scientific data, query-oriented evidence, infer and draw conclusions about the habitability of Earth in relation to the uninhabitability of other planets in the solar system. The topic chosen, is relevant to STE(A)M education since content, activities as well as pedagogical tools from Science, Math, Technology and Language Arts subjects are integrated in one unit to spark interest in finding solutions related to the real-life questions chosen for the present LS.

In addition, the topic is considered very exciting for students aged 10-11 (or even for younger students), something that could possibly trigger their interest as well as their critical thinking and creativity skills even more. To this end, apart from the inquiry-based learning that serves as the main student-centered approach and/or framework, various brainstorming activities, problem-solving, web applications, modelling activities and cooperative learning will be used to further enrich and support the teaching process.

Throughout the learning scenario and its activities, students are expected to question evidence regarding the planetary habitability, explain why Earth is considered habitable compared to other planets considering in particular the factor of gravity, argue on the habitability of other planets in relation to Earth by recognizing and comparing certain scientific evidence/information about them. Students are expected to construct a 3D model of the solar system and explain how it works, and argue on where humans could eventually live instead,

- 1) make conversions from Fahrenheit to Celsius by using a given equation (multiplication unit by fraction)
- 2) make conversions by using proportion
- 3) read and interpret data from tables and graphs
- 4) form questions based on their knowledge

Lesson 4

Students by the end of the lesson will be able to:

- 1) query (extra) evidence regarding the planetary habitability through a variety of articles
- 2) draw conclusions regarding the textual and structural characteristics of an article – what makes a text an article

Lesson 5

Students by the end of the lesson will be able to:

- 1) argue on where humans could live in case living conditions on Earth become less friendly for humans by writing an article
- 2) reflect upon their article based on certain (con)textual and structural criteria

Connection to STEM careers

It's expected that students will gain specific skills related to the most relevant in terms of demand careers of tomorrow in science, technology, engineering and maths, such as mathematician, environmental engineering technician engineer, research analyst, and/or statistician. Students will implement inquiry and mathematical skills throughout the learning scenario, they will practice critical-thinking and improve their creative writing skills by writing their own report or article based on scientific data. Lastly, they will construct a model based on their own perspective of the space and the solar system.

Age of students

11 years old (or younger students given that differentiation of content and tools will take place).

Time

Preparation time: 30 minutes (before each lesson)

Teaching time:

- STEM Subject 1 (Science) (Lesson 1): 80 minutes
- STEM Subject 2 (Science and Technology) (Lesson 2): 80 minutes
- STEM Subject 3 (Mathematics) (Lesson 3): 40 minutes
- non-STEM subject (Language Arts) (Lesson 4 & 5): 2 x 80 minutes

ΟΙ ΠΟΛΛΑΠΛΟΙ ΡΟΛΟΙ ΕΝΟΣ ΔΑΣΚΑΛΟΥ



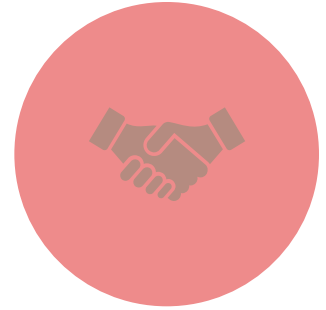
ΔΑΣΚΑΛΟΣ



ΣΥΜΒΟΥΛΟΣ ΣΠΟΥΔΩΝ/
ΕΠΑΓΓΕΛΜΑΤΙΚΟΥ
ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΥ



ΣΗΜΕΙΟ ΑΝΑΦΟΡΑΣ ΚΑΙ
ΕΠΙΛΥΣΗ ΠΡΟΒΛΗΜΑΤΩΝ



MENTOR

ΩΣ ΑΠΟΤΕΛΕΣΜΑ

- Ενώ οι δάσκαλοι έχουν την ευελιξία να επιλέξουν τα θέματα και δραστηριότητες του διδακτικού σεναρίου...
- ...θέλουμε να ληφθούν υπόψιν όλα τα παραπάνω.
- Keep in mind that the structure **is not subject to change**:
 - Table of contents
 - Introduction
 - Activities section and order
 - Lesson plan table
 - Annex

WHY NOT SUBJECT TO CHANGE?

The project team behind STE(A)M IT ->

- Analysed **academic** and **grey literature** of relevant papers and publications
- Proceeded to an extensive and detailed **SWOT** analysis
- Designed the Learning Scenario having in mind **3 stakeholders**:
 - Teachers
 - Industry
 - Ministries of Education

THE LEARNING PRODUCTS (ΠΡΟΪΟΝΤΑ ΔΙΔΑΣΚΑΛΙΑΣ)

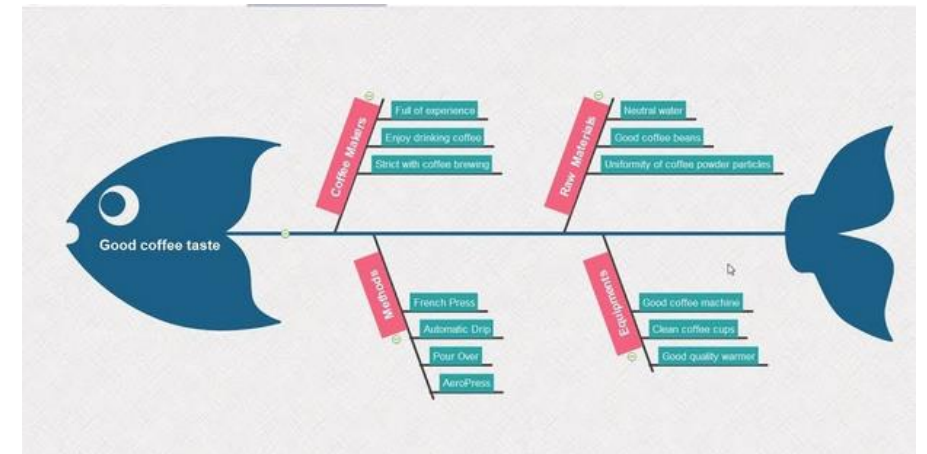
Η ΣΗΜΑΝΤΙΚΟΤΗΤΑ ΤΩΝ ΠΡΟΪΟΝΤΩΝ ΔΙΔΑΣΚΑΛΙΑΣ

- Ειδικός τομέας στο σενάριο διδασκαλίας (Master Learning Scenario) για τα προϊόντα της όπου μπορεί να γίνει μια λίστα από τις εργασίες που θα κάνουν οι μαθητές.
- Αυτό είναι απαραίτητο για :
 - Αξιολόγηση της κάθε δραστηριότητας και της προόδου των μαθητών
 - Ενημέρωση της προόδου των μαθητών κατά τη διάρκεια της φάσης της ανατροφοδότησης του LS

2 nd Lesson		
STEM Subject 1		
STEM Subject 1		
Learning products	<i>If you wish to share more materials that complement the text, please include them in the Annexes section and refer to them in this section as well.</i> /	
3 rd Lesson		

ONLINE TOOLS AND TEACHING AIDS TO CONSIDER FOR THE LEARNING PRODUCTS

- [Kahoot](#)
- [Padlet](#)
- [Mentimeter](#)
- QR codes
- Mindmaps ([eDraw](#))
- [Quizlet](#)
- [GimKit](#)
- [Tricider](#)
- Google Forms
- Google spreadsheets
- Maps
- [EU Survey](#)



Source: Gadgets Portal YouTube channel

...BUT CONSIDER



WHILE ALL THE ONLINE,
INTERACTIVE TOOLS ARE A GREAT
TEACHING AID THAT WILL HELP YOU
ENGAGE YOUR STUDENTS WE
EXPECT:



QUALITY AND MEANINGFUL
ACTIVITIES AND ANNEXED
MATERIALS



ACCURATELY CITED RESOURCES
WHEN YOUR STUDENTS PROCEED IN
INCLUDING FINDINGS



SUFFICIENTLY EXPLAINED, CLEARLY
DEFINED EXPLANATIONS

ΜΕΘΟΔΟΛΟΓΙΕΣ

ANNEX 1

Annexes

A thorough and complete list of all the materials used will be asked from all teachers. Those materials will be cited as Annexes and they can be further cited in the learning scenario.

Annex 1

PEDAGOGICAL TRENDS IN EDUCATION

Disclaimer: Information presented in this document has been previously partially published in the Scientix Newsletter "Pedagogical trends in education", May 2019:
<http://files.eun.org/scientix/scx3/newsletter/Scientix-Newsletter-May-19.pdf>

Inquiry-based science education

IBSE adopts John Dewey's principle that education begins with curiosity (Savery, 2006), and makes students go through all the steps of scientific research: ask a question, develop a hypothesis, plan how to test this hypothesis, collect data, analyse the results and share it with peers (Pedaste et al. 2015). IBSE is ideal for science education, because it makes teaching more hands-on, and is perfect to learn how scientific research works. Students learn how to formulate questions answerable through experimentation. The teacher has both a facilitator role and an instructor role, making it an in-between method compared to full facilitation in problem-based, and instruction in project-based learning. However, the approach can be gradually made student-directed; students can start an IBSE project with a question provided by the teacher, and then can come up with their own questions to transfer what they learned for deeper learning.

IBSE does not only tap into creativity, problem-solving, and critical and analytical thinking. It also sets the stage for learning about how to collect and interpret data (become science and data-literate), and how to do this ethically and reliably. All these are skills of the 21st century, where data is abundantly available in every part of life.

As mentioned in the recent European Schoolnet publication, while inquiry-based science education (IBSE) has been already around in STEM education for decades, there is still much room for improvement in teachers' development and continued dissemination of innovative pedagogical approaches. To highlight the impact of IBSE, its challenges, and the initiatives addressing these, we published the "Teacher Training and IBSE Practice in Europe, A European Schoolnet overview".

Research shows that IBSE results in greater interest in Science, and motivation for STEM careers. Another important observation from the publication is that the benefits of IBSE are long-term and

maintained, in contrast to the short-term acquisitions of traditional pedagogies that also come with less inclusion of both genders, and less interest in STEM.

One challenge is teacher support: teachers report that they receive little support in implementing IBSE in their classroom. Another challenge to IBSE is standard assessment: PISA tests, as well as end-of-secondary-education exams, are still more focused on recall and repeated-drill exercises, deterring the use of more diverse pedagogies. In order to better integrate inquiry-based methods in school curricula, standardized tests also need to evolve along with traditional pedagogies.

Problem, project and challenge-based learning

Problem-based learning (PBL) is a student-centred multi-disciplinary method that was initially adopted in medical education as a means to put multiple topics in context (Newman, 2003). PBL aims to make students good problem-solvers in the real world: for instance, to put knowledge from multiple disciplines into use, and be able to work with others productively. After all, real-world problems are hardly ever solvable by one single discipline and one single person.

A PBL activity consists of working on an open-ended, even ill-defined question, with no solution provided by the teacher. Students need to work collaboratively and devise a solution to the problem by themselves. The key component is that it is student-centred; students are more motivated when they are responsible for the solution to the problem, and when the whole process rests with them (Savery, 2006). Decades of research has established that although students who went through PBL do not necessarily score better on standardized exams, they are definitely better problem-solvers (Strobel & van Barneveld, 2009).

Project-based learning also involves collaborative learning and finding a solution to a problem. However, the process and the end product are more specified from the beginning. Students work on a project for an extended period of time, a project that will produce a solution to a complex question or solve a complicated problem. The role of the teacher is more active here because multiple obstacles are typically encountered in the production of something like a rocket, or a space habitat, and these obstacles mark the moments for the teacher to instruct specific topics.

Finally, with **challenge-based learning (CBL)** (Johnson et al. 2009), students are again asked to develop a solution to a problem. However, they are only provided with a "big idea", a societal problem that they need to address with a challenge of their choosing (e.g. disinterest in mathematics, low turnout in elections). While the use of technology can be considered optional in other trends, technology needs to be incorporated in every step in CBL. Similar to project-based learning, there is an end product, although this product is determined in the process, not at the beginning. The focus is on the use of ICT in the collection of data and sharing the results.

Design thinking

If IBSE recreates scientific methodology in the classroom, design thinking (DT) recreates the design and prototype production. DT helps students develop skills in the society, and entrepreneurship. DT can be implemented in the classroom; the difference is that the problem is identified by the students to solve the problem. The product is tested and refined. The cycle of steps: (1) empathize; (2) define; (3) ideate; (4) prototype; (5) test.

Blended-learning and the flipped classroom

In a classroom where all students are facing the instructor, the teacher controls the pace from the topic, even if for thinking deeper about a specific topic. In a flipped classroom, the undivided attention of the whole classroom because the teacher can adapt the pace and a different pace. With online content, students can learn at their own pace. In turn, the teacher can use the classroom to engage students in assignments. Blended-learning and flipped classroom are two different approaches to learn in their own pace, and deepen their learning with these concepts are used interchangeably, they are not the same. Blended-learning complements online learning with class instruction. In a flipped classroom, students learn the material before coming to class for the next hours.

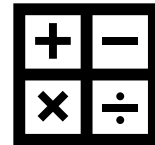
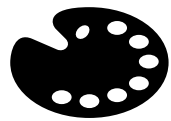
Content and Language Integrated Learning (CLIL)

Content and language integrated learning (CLIL) is a pedagogical approach that emphasises on the integration of foreign language and content. CLIL is a pedagogical approach that uses foreign language as the medium of instruction in non-linguistic subjects. CLIL aims at the improvement of both the second language and the immersion of subjects to humanities. According to Cenoz et al. (2013), "CLIL in Europe have funded many initiatives in support of CLIL as a means of enhancing second-language (L2) education and bilingualism". CLIL further supports that CLIL is applied successfully in task-based learning, specifically to the application of CLIL in the science classroom, enabling learners to learn a school subject that exists in a foreign language they are learning, provide authentic learning experiences in their school and support learners' cognitive skills by applying them in the teaching of science context.

ΜΕΘΟΔΟΛΟΓΙΕΣ ΣΤΟ ΠΑΡΑΡΤΗΜΑ

- Στο παράρτημα έχουν περιληφθεί παραδείγματα από μεθοδολογίες που μπορούν να εφαρμοστούν και να υποστηρίξουν την διεπιστημονική/διαθεματική διδασκαλία και μάθηση STEM
- Ανάλογα με τα μαθήματα που θα περιλάβετε, μπορείτε να χρησιμοποιήσετε περισσότερες από μια.

(π.χ. αν θα περιλάβετε ένα μάθημα μαθηματικών και ένα τέχνης ή ξένης γλώσσας μπορείτε να χρησιμοποιήσετε διαθεματική μέθοδο και μέθοδο CLIL)



PEDAGOGIES

INQUIRY-BASED
LEARNING
(ΔΙΑΘΕΜΑΤΙΚΗ
ΠΡΟΣΕΓΓΙΣΗ)

PROBLEM /
PROJECT /
CHALLENGE-
BASED LEARNING

DESIGN
THINKING (DT)

BLENDED
LEARNING AND
FLIPPED
CLASSROOM

CONTENT AND
LANGUAGE
INTEGRATED
LEARNING (CLIL)

INQUIRY-BASED SCIENCE EDUCATION (IBSE)

- **Curiosity** (John Dewey)
 - Teacher: **facilitator and instructor**
 - **Creativity, problem-solving, critical and analytical thinking; science and data-literacy**
 - **Interest** in Science, **motivation** for STEM careers, **long-term, inclusion**
 - Challenges:
 - Little **teacher support**
 - **Standard assessment**
1. Ask a question
 2. Develop a hypothesis
 3. Plan how to test this hypothesis
 4. Collect data
 5. Analyse the results
 6. Share it with peers

PROBLEM, PROJECT AND CHALLENGE-BASED LEARNING

- **Problem-based learning** aims to make students good problem-solvers in the real world: for instance, to put knowledge from multiple disciplines into use, and be able to work with others productively
- **Project-based learning** also involves collaborative learning and finding a solution to a problem
- With **challenge-based learning (CBL)** students are again asked to develop a solution to a problem. However, they are only provided with a “big idea”, a societal problem that they need to address with a challenge of their choosing (e.g. disinterest in mathematics, low upturn in elections). While the use of technology can be considered optional in other trends, technology needs to be incorporated in every step in CBL



Which one of those methodologies have you implemented in class?



Could you provide an example of an activity?

YOUR EXAMPLES!

Η ΕΦΑΡΜΟΓΗ ΤΟΥ ΔΙΚΟΥ ΜΑΣ ΜΑΘΗΣΙΑΚΟΥ ΣΕΝΑΡΙΟΥ (ILS)

«ΠΟΥ ΘΑ ΜΠΟΡΟΥΣΑΝ ΟΙ ΑΝΘΡΩΠΟΙ ΝΑ ΖΗΣΟΥΝ ΣΕ ΠΕΡΙΠΤΩΣΗ ΠΟΥ ΟΙ ΣΥΝΘΗΚΕΣ ΣΤΗ ΓΗ ΔΕΝ
ΕΙΝΑΙ ΙΔΑΝΙΚΕΣ ΓΙΑ ΝΑ ΚΑΤΟΙΚΕΙΤΑΙ;»

ΤΟ ΔΙΚΟ ΜΑΣ LS

- **Ενότητα:** Το ηλιακό σύστημα και η Γη
- **Θέμα :** Πού θα μπορούσαν να ζήσουν οι άνθρωποι σε περίπτωση που οι συνθήκες στη Γη δεν είναι ιδανικές για να κατοικείται;
- (Η παρουσίαση θα γίνει από την ιστοσελίδα STE (A) M IT)



Source: collegexpress

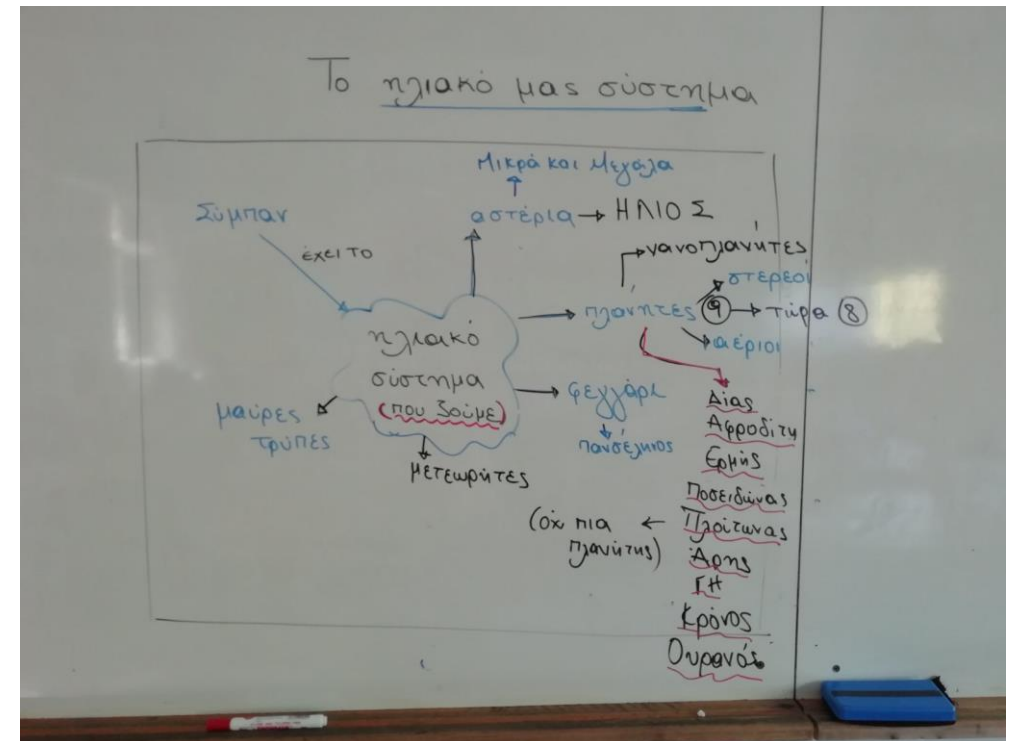
Η ΟΜΑΔΑ ΜΑΣ

- Η ομάδα μας αποτελείται από τρία μέλη, τρεις δασκάλες (μάχιμες):
 1. Ζωή Κοφινά Μιχαήλ (ΙΣΤ' Δημοτικό Λεμεσού)
 2. Σκευή Σοφοκλέους (Α' Δημοτικό Λεμεσού)
 3. Φλώρια Βαλανίδου (Δ' Δημοτικό Λεμεσού)
- Από τρία διαφορετικά σχολεία, εντούτοις η συνεργασία ήταν άψογη με εξαιρετικό αποτέλεσμα.
- Ο λόγος της ύπαρξης τριμελούς ομάδας ήταν προϋπόθεση του προγράμματος, τόσο στη δημοτική όσο και στη δευτεροβάθμια εκπαίδευση έτσι ώστε το κάθε μέλος να αναλάβει τη διδασκαλία μιας γνωστικής περιοχής του θέματος (π.χ. Η Σκευή ανέλαβε τη διδασκαλία του μαθήματος των Μαθηματικών του σεναρίου μας και της Τεχνολογίας, η Φλώρια της Γλώσσας και εγώ των Φυσικών Επιστημών).

ΠΑΡΟΥΣΙΑΣΗ ΤΟΥ ΜΑΘΗΣΙΑΚΟΥ ΜΑΣ ΣΕΝΑΡΙΟΥ

- Ένα μαθησιακό σενάριο που εξυπηρετεί τη φιλοσοφία και τα εργαλεία της εκπαίδευσης STEAM (π.χ. Inquiry based learning, the 4th Cs, collaboration (συνεργασία), creativity (δημιουργικότητα), critical thinking (κριτική σκέψη) και communication (επικοινωνία).
- Ενδιαφέρον για τους μαθητές
- ΗΛΙΑΚΟ ΣΥΣΤΗΜΑ: «Το ηλιακό σύστημα και η Γη: Που θα μπορούσαν οι άνθρωποι να ζήσουν εκτός από τον πλανήτη Γη;»
- Για να εξυπηρετήσουμε το σενάριο, ερευνήσαμε τα εξής σημεία:
 1. Ποιες είναι οι τωρινές συνθήκες στη Γη που την καθιστούν κατοικήσιμη;
 2. Που αλλού θα μπορούσαν να ζήσουν οι άνθρωποι σε περίπτωση που οι συνθήκες διαβίωσης στη Γη γίνουν λιγότερο φιλικές;

- Για να πετύχουμε τους στόχους μας επιλέξαμε διαφορετικά εφαρμογίδια, μαθηματικά και επιστημονικά δεδομένα και σειροθετήσαμε/ επιλέξαμε να χρησιμοποιήσουμε τέσσερις διαφορετικές γνωστικές περιοχές (Φυσικές Επιστήμες, Τεχνολογία/Μηχανική, Μαθηματικά, Γλώσσα)



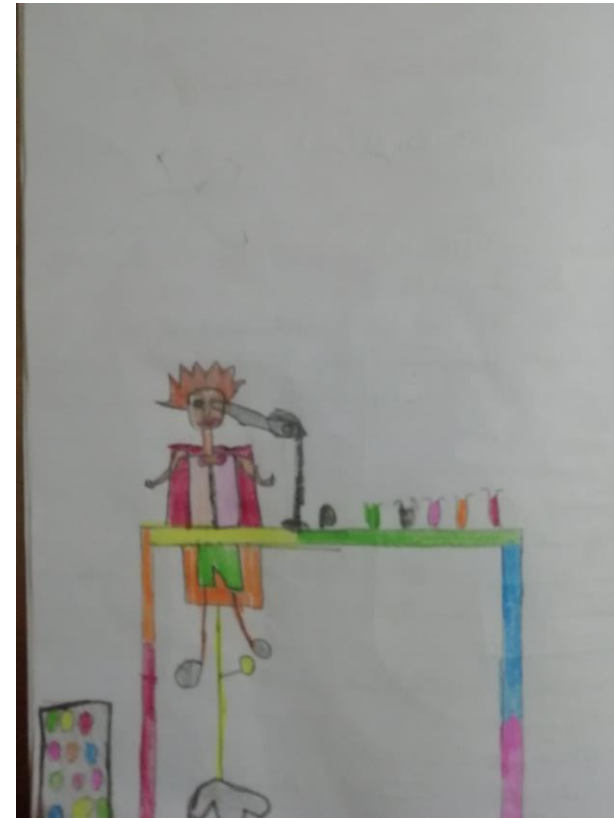


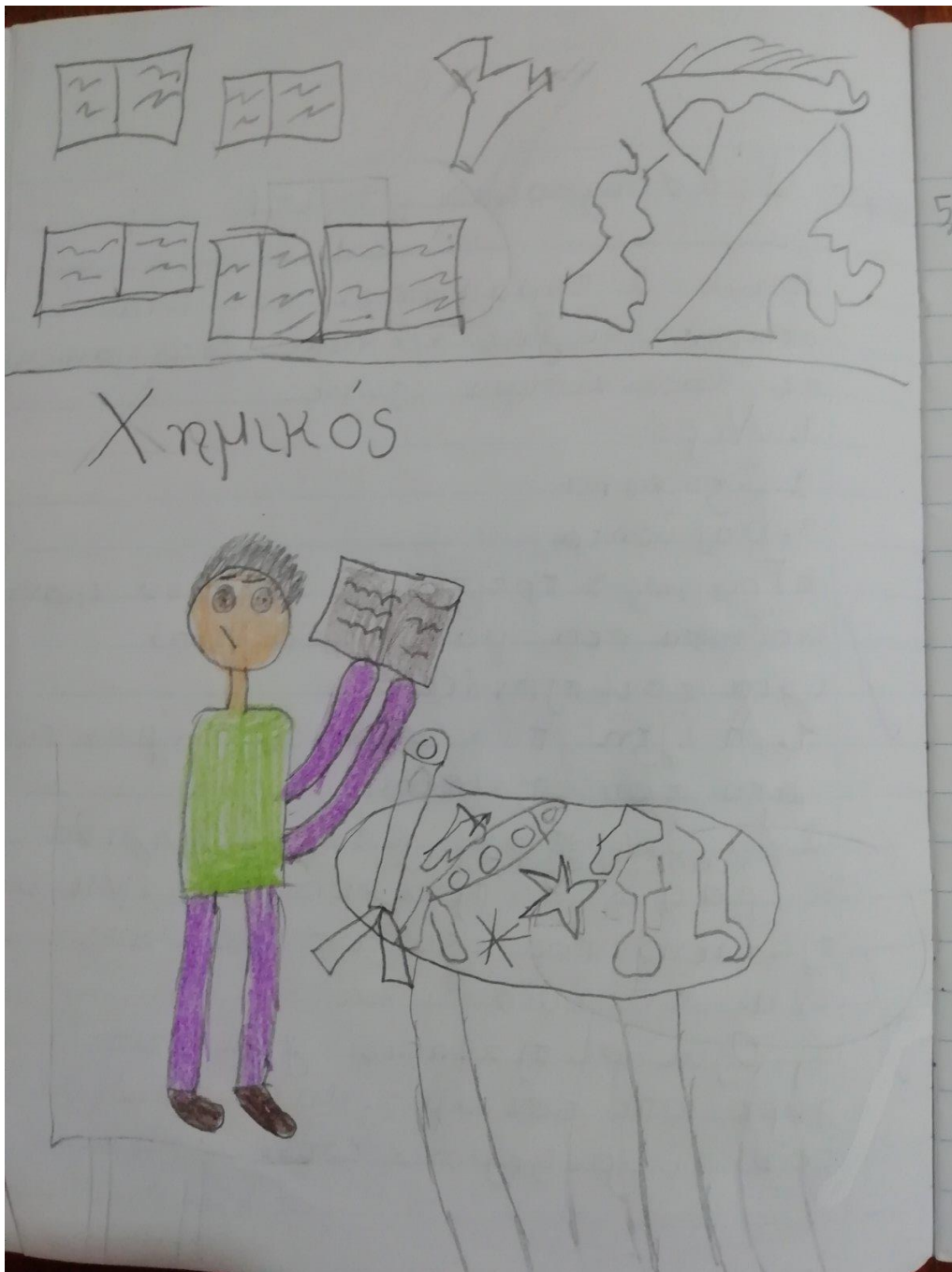
Κάνω υποθέσεις (σχετικές με τις εικόνες που είδα).

① Αν συνεχίσει ο γκαμπιέρ Γκ να μην είναι φιλικός σε μένα για να ζήσω, τότε ίσως πρέπει να φάω να βρω έναν άλλο γκαμπιέρ για να ζήσω με συνθήκες κατάλληλες για ανθρώπους (νερό, οξυγόνο, δέντρα)

ΣΥΝΔΕΣΗ ΤΟΥ ΜΑΘΗΣΙΑΚΟΥ ΜΑΣ ΣΕΝΑΡΙΟΥ ΜΕ STEM CAREER PATHS

- Οι μαθητές γνωρίζουν/χρησιμοποιούν συγκεκριμένες δεξιότητες που απαιτούν τα σχετικά με STEM επαγγέλματα όπως **δεξιότητες κριτικής σκέψης που αφορούν ανάλυση, ερμηνεία, αξιολόγηση και φαντασία**.
- Καλούνται να χρησιμοποιήσουν **βασικές νοητικές δεξιότητες και διαδικασίες** που απαιτούν τα σχετικά με STEM επαγγέλματα όπως η **μοντελοποίηση**, μια διαδικασία που απαιτείται από επαγγέλματα stem όπως η μηχανική.
- **Η μέθοδος της διερώτησης** που έχει εφαρμοστεί σε αυτό το μαθησιακό σενάριο εμπλέκει τους μαθητές στον **επιστημονικό τρόπο σκέψης** έτσι ώστε να αποφασίσουν πως να χειριστούν ένα πραγματικό/καθημερινό πρόβλημα. Ειδικότερα οι μαθητές μαθαίνουν πως να **επισημάνουν ένα πρόβλημα, να διατυπώσουν διερευνήσιμα ερωτήματα, υποθέσεις, να αναλύσουν διαφορετικά είδη δεδομένων, να βρουν απαντήσεις μέσα από πηγές και εργαλεία αγνώστα σε αυτούς, να καταλήξουν σε συμπεράσματα**.
- Αυτές είναι οι διαδικασίες και οι δεξιότητες που θεωρούμε απαραίτητες να έχουν οι μαθητές έτσι ώστε να είναι ικανοί να αντιμετωπίσουν τις προκλήσεις και τα καθημερινά προβλήματα που θα μπορούσαν να επηρεάσουν τους ανθρώπους στο **μέλλον**.





ΕΦΑΡΜΟΓΗ ΤΟΥ ΜΑΘΗΣΙΑΚΟΥ ΜΑΣ ΣΕΝΑΡΙΟΥ

- Η εφαρμογή έγινε από τις 24 Σεπτεμβρίου 2020 μέχρι τις 2 Οκτωβρίου 2020, σε Ε' τάξη (Ε' 1), ΙΣΤ' Δημοτικό Λεμεσού. (Εφαρμογές του σεναρίου έγιναν επίσης από την Σκεύη και Φλώρια στις τάξεις τους (ΣΤ' τάξεις)).
- Ακολουθήθηκε η σειρά όπως καταγράφηκε στο Μαθησιακό Σενάριο, με τη παράλειψη κάποιων αποσπασμάτων ή τμημάτων λόγω προσαρμογής στις ανάγκες/ιδιαιτερότητες της τάξης, λόγω προβλημάτων τεχνολογίας (ίντερνετ, τάμπλετ), λόγω μέτρων για προφύλαξη από τον κορωνοϊό (κάποιες δραστηριότητες διαφοροποιήθηκαν έτσι ώστε οι μαθητές να δουλεύουν ατομικά και όχι σε ομάδες)



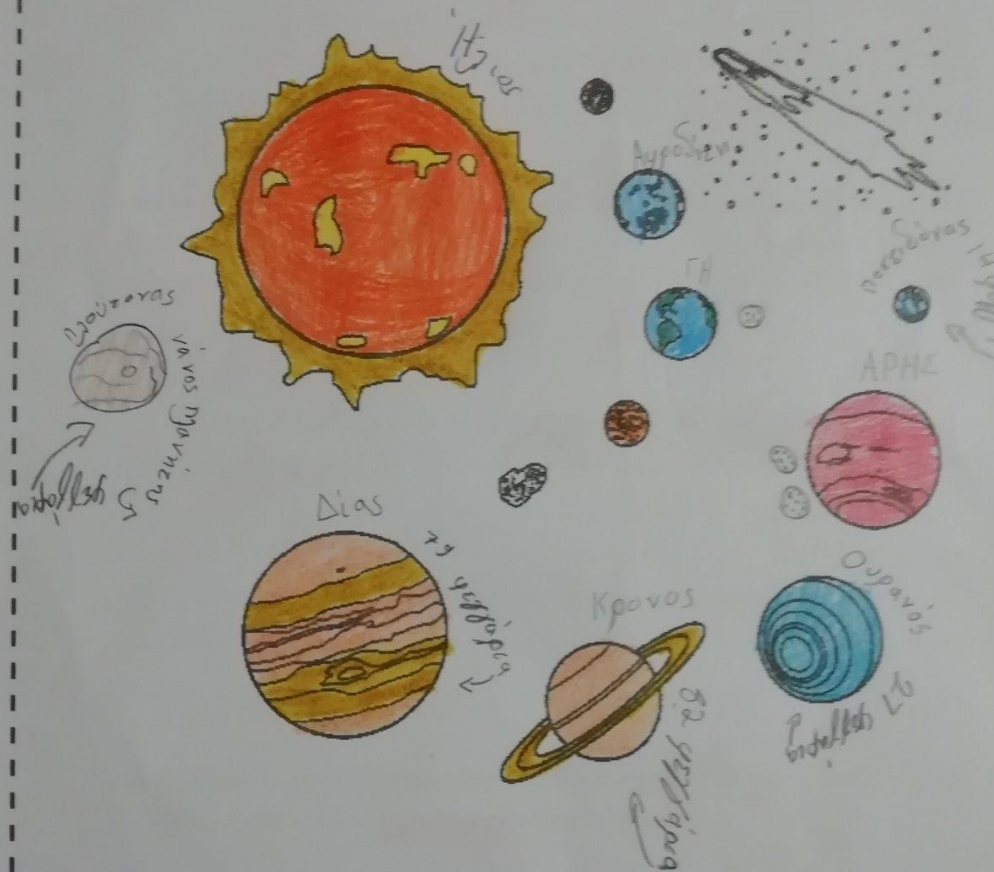
ΕΦΑΡΜΟΓΗ ΤΟΥ ΜΑΘΗΣΙΑΚΟΥ ΜΑΣ ΣΕΝΑΡΙΟΥ

- Το Μαθησιακό Σενάριο κατάφερε να προσελκύσει το ενδιαφέρον των μαθητων, ιδιαίτερα με τη **μέθοδο της διερώτησης** από το πρώτο μάθημα. Επιπλέον το ίδιο το **σενάριο (Θέμα, τίτλος, περιεχόμενο)** ήταν ενδιαφέρον και αποτέλεσε πρόκληση για τους μαθητές. Τέλος, η ενασχόληση των μαθητών σε **μια ποικιλία ενδιαφερουσων δραστηριοτήτων**, μεταξύ των οποίων και της δραστηριότητας γραπτού λόγου στο τέλος του μαθησιακού σεναρίου έτσι ώστε μπορούσαν να δράσουν στο σενάριο ως ειδικοί, βοήθησε πολύ τη μαθησιακή διαδικασία.



ΗΛΙΑΚΟ ΣΥΣΤΗΜΑ

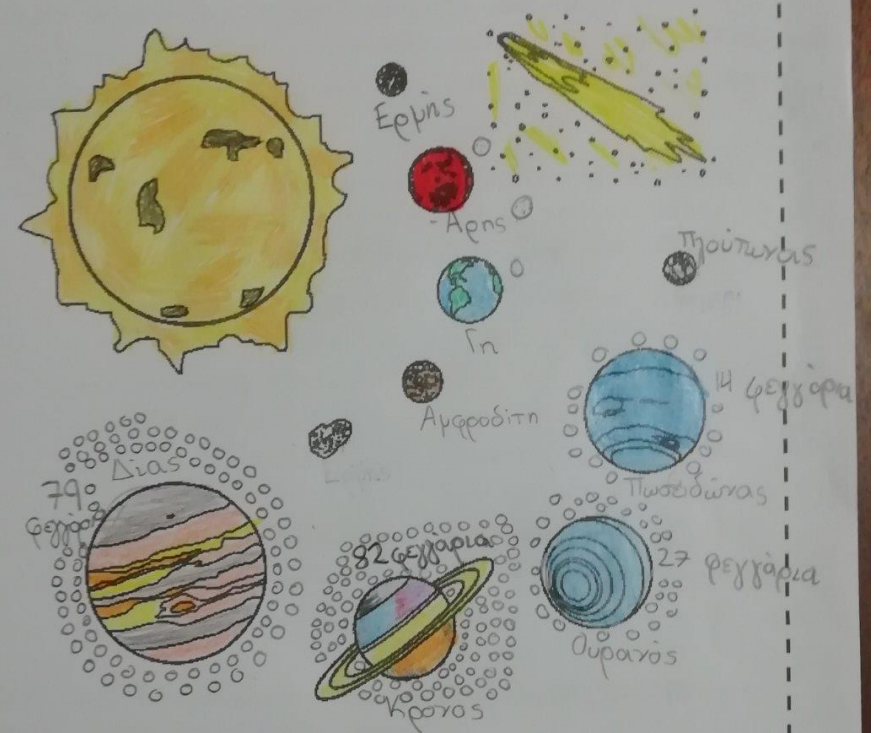
ΠΛΑΝΗΤΕΣ



Όνομα: Μαρία Ανδρέου Τάξη: Α1

ΗΛΙΑΚΟ ΣΥΣΤΗΜΑ

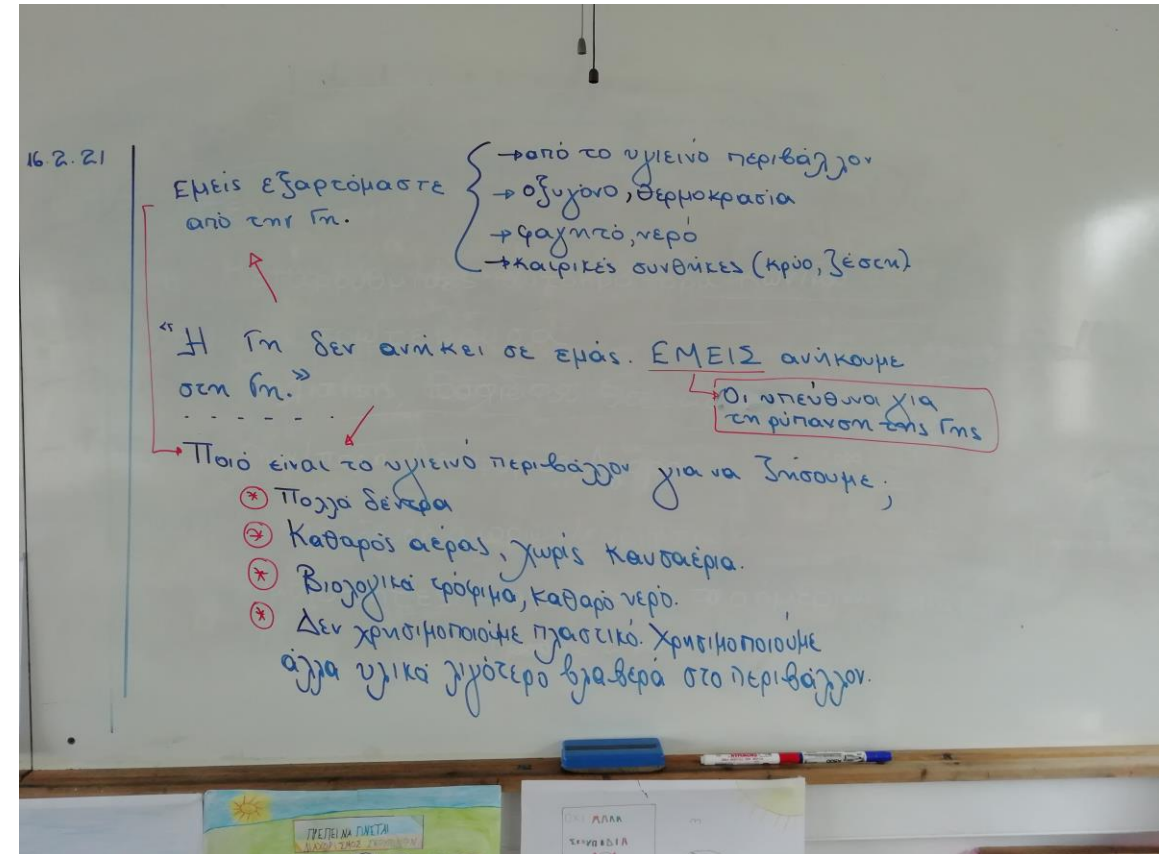
ΠΛΑΝΗΤΕΣ



Όνομα: Μαρία Τάξη: Ε1

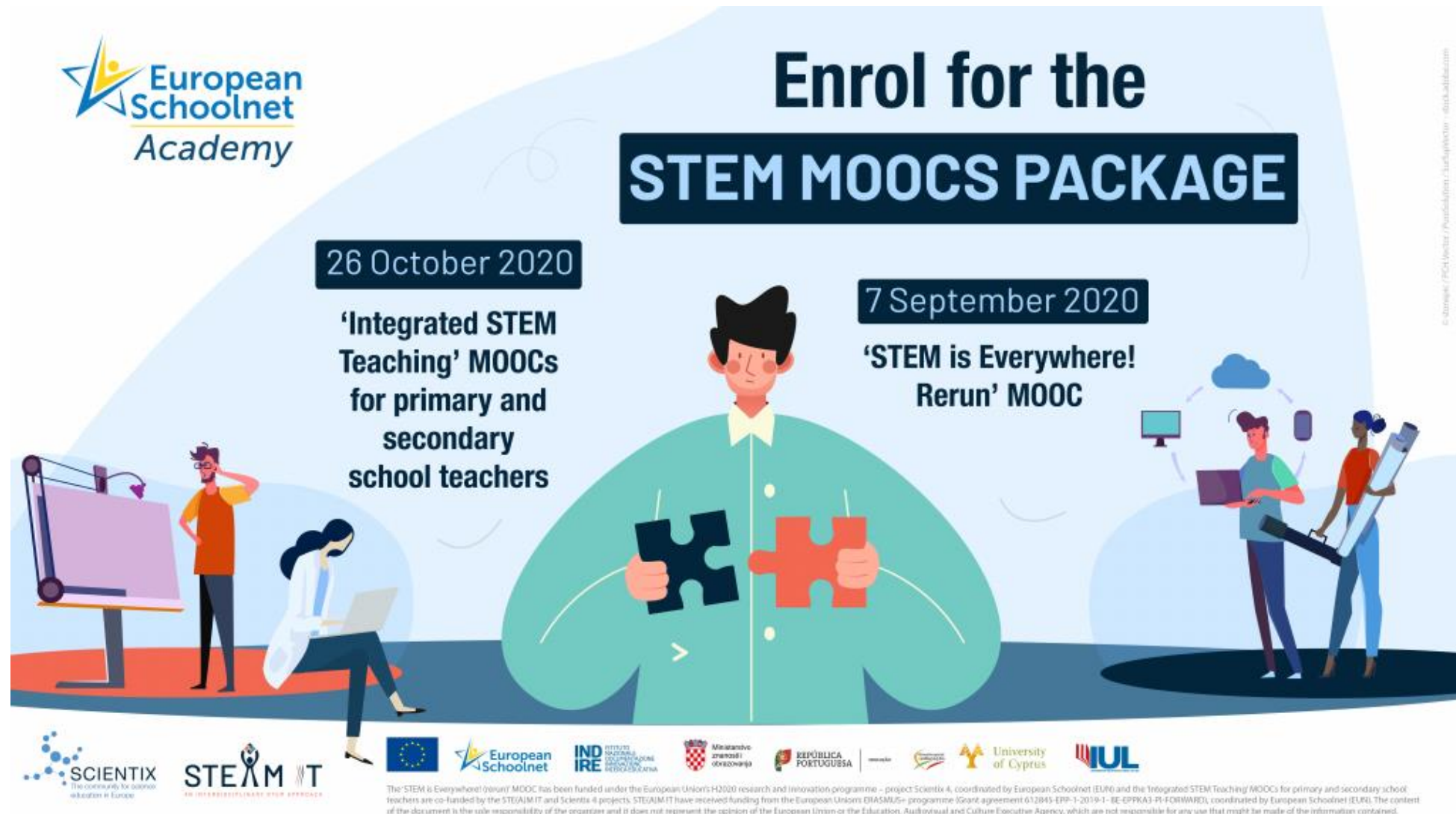
ΕΦΑΡΜΟΓΗ ΣΕΝΑΡΙΟΥ ΑΛΛΗΣ ΟΜΑΔΑΣ (ΧΩΡΑΣ)

- Στα πλαίσια της συμμετοχής στο STE(A)M IT, οι συμμετέχοντες (**4 σενάρια δημοτικής εκπαίδευσης και 7 δευτεροβάθμιας**), εκτός από την ανάπτυξη και εφαρμογή του δικού τους σεναρίου, έπρεπε να εφαρμόσουν και το σενάριο μιας από τις άλλες ομάδες και να δώσουν ανατροφοδότηση στην ομάδα αυτή.
- Λόγω κορονοϊού και της καθυστέρησης που προκαλείται λόγω των μέτρων που λαμβάνονται (κλείσιμο σχολείων), σε αυτό το στάδιο είμαστε κάποιες από τις ομάδες τώρα. Η ομάδα μας έχει αναλάβει την εφαρμογή της Κροατίας με τίτλο "Together we can make the difference".
- Η εφαρμογή είναι προς το τέλος και σίγουρα τώρα θα είχε τελειώσει, αν δεν γινόταν το κλείσιμο των σχολείων στη Λεμεσό.



ΔΙΑΔΙΚΤΥΑΚΑ ΜΑΘΗΜΑΤΑ (MOOCS & CAPACITY BUILDING PROGRAM)

ΠΡΟΣΦΟΡΑ MOOCS (MASSIVE ONLINE COURSES)



The banner features a central illustration of a man in a green shirt holding two large puzzle pieces, one black and one red. To his left, a man in an orange shirt stands next to a whiteboard, and a woman in a white lab coat sits on the floor using a laptop. To his right, two people are shown: one holding a laptop and another holding a large rolled-up document. The background is a light blue gradient with stylized clouds.

European Schoolnet Academy

Enrol for the STEM MOOCS PACKAGE

26 October 2020
'Integrated STEM Teaching' MOOCs for primary and secondary school teachers

7 September 2020
'STEM is Everywhere! Rerun' MOOC

SCIENTIX
The community for science education in Europe

STEAM IT
AN INTERDISCIPLINARY STEM APPROACH

European Schoolnet

INDIRE
INSTITUTO NACIONAL DE INOVAÇÃO E DESENVOLVIMENTO TECNOLÓGICO

Ministarstvo znanosti i obrazovanja

REPÚBLICA PORTUGUESA

University of Cyprus

IUL

STEAM IT
LINEARY STEM APPROACH

The 'STEM is Everywhere! Rerun' MOOC has been funded under the European Union's H2020 research and innovation programme - project Scientix 4, coordinated by European Schoolnet (EUN) and the Integrated STEM Teaching MOOCs for primary and secondary school teachers are co-funded by the STEAM IT and Scientix 4 projects. STEAM IT have received funding from the European Union DIAPYLOS programme (Grant agreement 612045-EPF-1-2019-1-BE-CP-FA3-PI-FORWARD), coordinated by European Schoolnet (EUN). The content of the document is the sole responsibility of the organizer and it does not represent the opinion of the European Union or the Education, Audiovisual and Culture Executive Agency, which are not responsible for any use that might be made of the information contained.

CAPACITY BUILDING PROGRAM FOR TEACHERS

<https://www.europeanschoolnetacademy.eu/>



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Welcome to the European Schoolnet Academy!
free online professional development courses to enhance your teaching practice



DEPIT

Designing for Personalization and Inclusion with Technologies

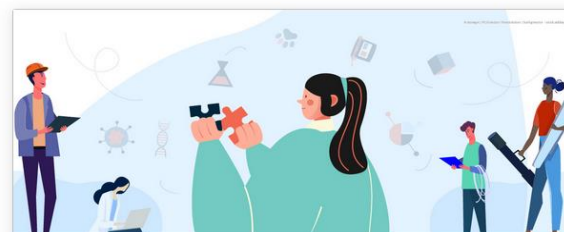
Starts: May 13, 2020



Scientix

STEM Is Everywhere! Rerun

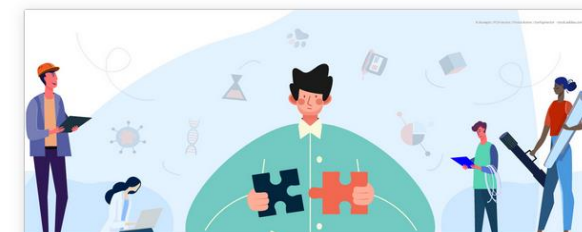
Starts: Sep 7, 2020



STEAM_IT

Integrated STEM Teaching for Primary Schools

Starts: Oct 26, 2020



STEAM_IT

Integrated STEM Teaching for Secondary Schools

Starts: Oct 26, 2020

CAPACITY BUILDING PROGRAM FOR TEACHERS



DISCOVER THE EUROPEAN SCHOOLNET ACADEMY STEM MOOCS PACKAGE

Scientix, STE(A)M IT and European Schoolnet Academy are proud to announce the launch of their first STEM MOOCs package! With these courses, teachers will have the opportunity to bring their learning experience to the next level by mastering the integration of real-world STEM problems in their lessons with the 'STEM is Everywhere! Rerun' MOOC, and discovering how to develop and implement a STEM integrated lesson plan with the STE(A)M IT MOOCs! Teachers are welcome to join either course, or even better, both* in order to get the special certificate!

About the 'STEM is Everywhere! Rerun' MOOC

Start date: 7th September 2020

Duration: 5.5 weeks

Number of modules: 4 (4-5 hours per module)

Designed and carried out by Scientix, the community for science education in Europe, together with the European Schoolnet Academy, the 'STEM is Everywhere! Rerun' Massive Online Open Course will help **primary and secondary school teachers, and teacher trainers from Europe and beyond**, to identify Science, Technology, Engineering and Mathematics (STEM) in everyday life and learn how to integrate real-world STEM problems to their lessons and practice!

Join the course to find classroom activities and resources on how to use real-world problems in your STEM teaching!

[Download the dissemination package and register here!](#)

STEM MOOCS PACKAGE
2 MOOCS - 8 MODULES
2 CERTIFICATES - 1 SPECIAL CERTIFICATE
1 UNIQUE OPPORTUNITY

* If you already have the STEM is everywhere MOOC certificate from 2018, you are already eligible for the special certificate if you complete one of the Integrated STEM Teaching MOOCs!

The 'STEM is Everywhere! (rerun)' MOOC has been funded under the European Union's H2020 research and innovation programme – project Scientix 4, coordinated by European Schoolnet (EUN) and the Integrated STEM Teaching MOOCs are co-funded by the STEAM IT and Scientix 4 projects. STEAM IT has received funding from the European Union's ERASMUS+ programme (Grant agreement 632845-EPF-1-2019-1-BE-EPKKA3-PI-FORWARD), coordinated by European Schoolnet (EUN). The content of the document is the sole responsibility of the organizer and it does not represent the opinion of the European Union or the Education, Audiovisual and Culture Executive Agency, which are not responsible for any use that might be made of the information contained.

Welcome to the *Integrated STEM Teaching for Primary Schools* MOOC



On this page

[About the course](#)

[Learning objectives](#)

[Prerequisites](#)

[Modules](#)

[Certification](#)

[Course staff](#)

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This MOOC is relevant to primary school teachers of all levels of experience who are interested in learning how to go from teaching isolated Physics, Chemistry, Biology, Science, Technology, Engineering and Mathematics classes, to a real integrated STEM teaching of these topics, not only among themselves but with all other disciplines. This MOOC will examine the opportunities offered by integrated STEM teaching and will provide many practical examples.

Join us in the [Facebook group](#) or share your thoughts on Twitter using the hashtag [#STEAMIT_project](#)

Learning objectives

In this MOOC, you will:

- Focus and learn about STEM integrated teaching approaches
- Learn about innovative pedagogies
- Contextualize STEM knowledge through industry-education cooperation
- Explore STEM careers and the skills needed for these careers

Prerequisites

This course is relevant to all teachers who want to transform their teaching and enrich their skills by learning how to use and apply the STE(A)M integrated teaching in their classroom.

Modules

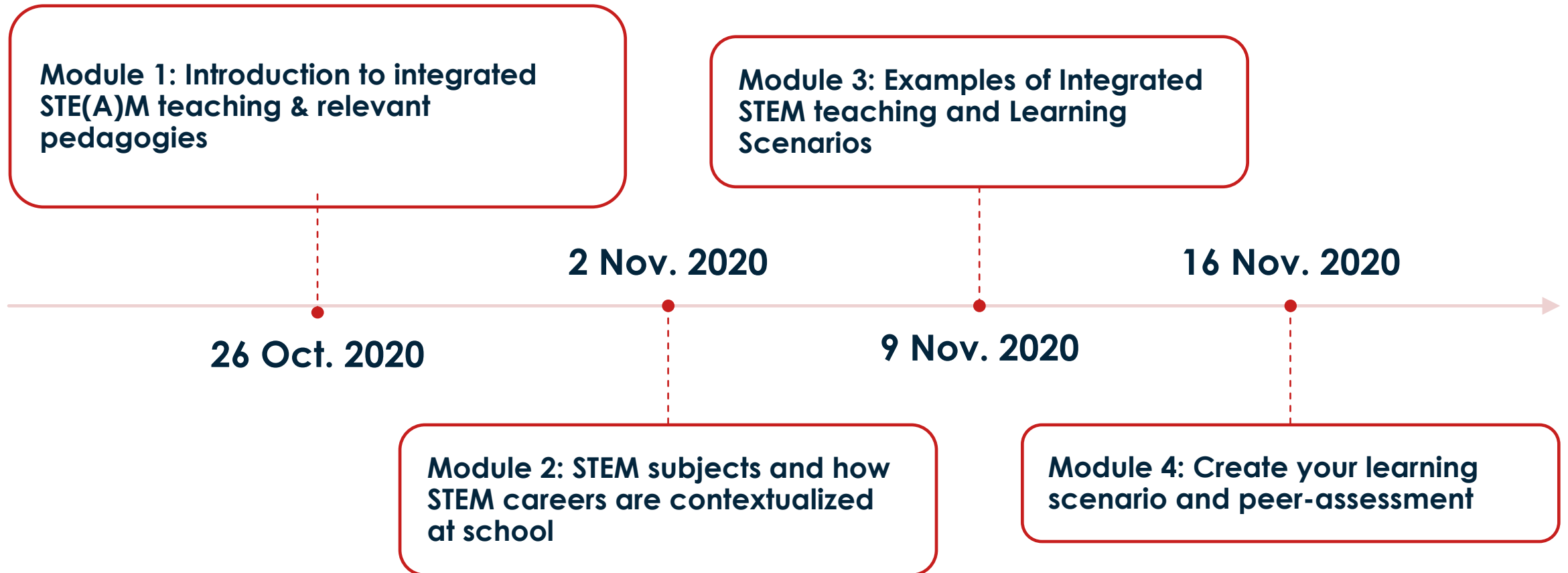
- Module 1: Introduction to integrated STE(A)M teaching & relevant pedagogies - *opens on 26/10/2020*
- Module 2: STEM subjects and how STEM careers are contextualized at school - *opens on 02/11/2020*
- Module 3: Examples of Integrated STEM teaching and Learning Scenarios - *opens on 09/11/2020*
- Module 4: Create your learning scenario and peer-assessment - *opens on 16/12/2020*

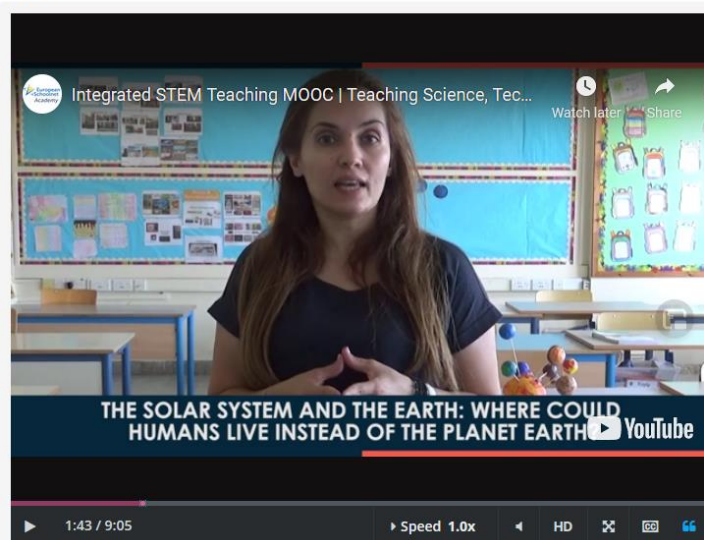
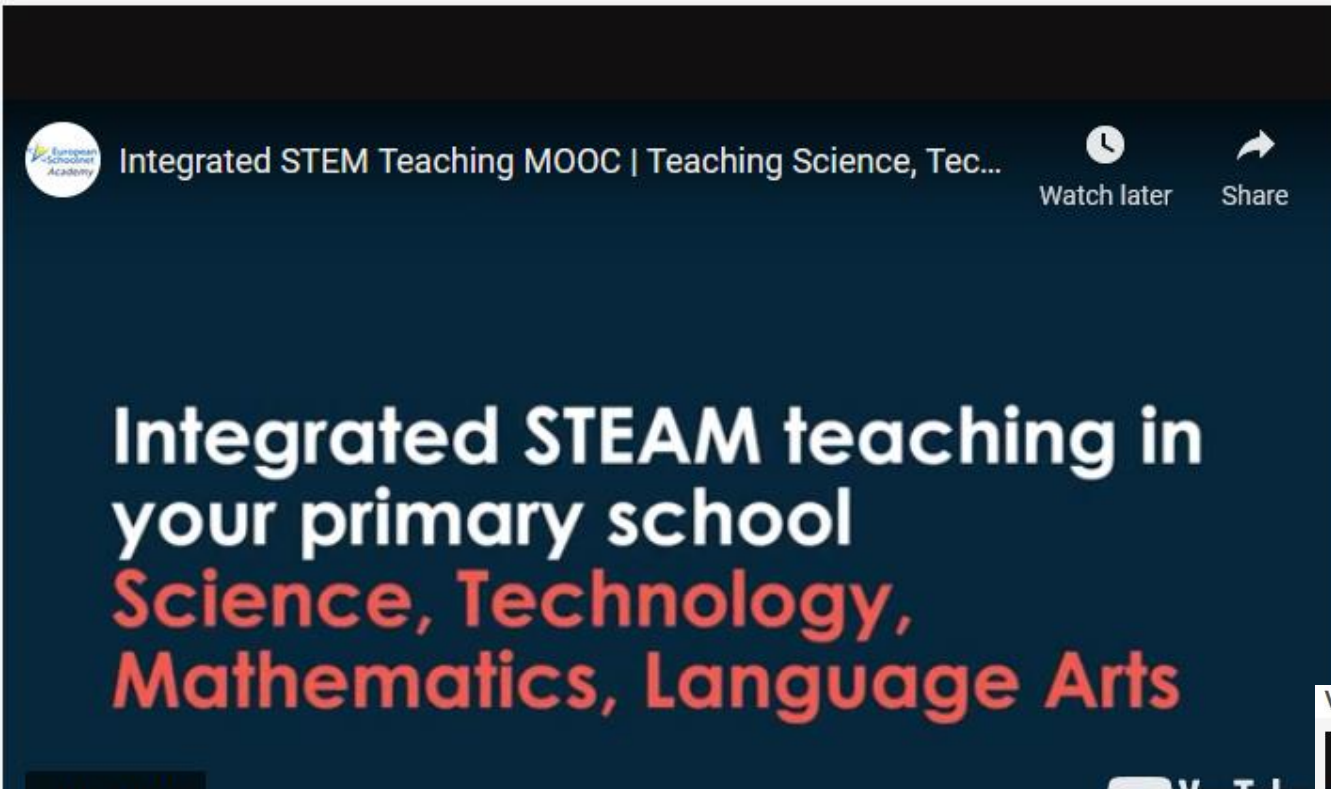
Certification

In order to earn a course certificate, course participants need to pass all the quizzes, submit learning scenario and review three lesson plans of other participants. The final deadline to complete all activities is **02 December 2020, 23:59 CEST**. In order to receive the certificate, the participation in the quizzes will count for 15%, and the learning scenario together with the peer reviews will count for 85%. **The overall passing grade is 95%.**



MODULES





based learning, the 4 Cs

critical, creativity thinking, collaboration, and communication.

At the same time, we had to choose an interesting subject for the students to ensure their full engagement.

Under this framework, the Solar System is the subject that we had to choose.

Our learning scenario is titled "The Solar System and the Earth: Where could humans live instead of the planet Earth?"

To investigate this learning scenario, two questions were generated.

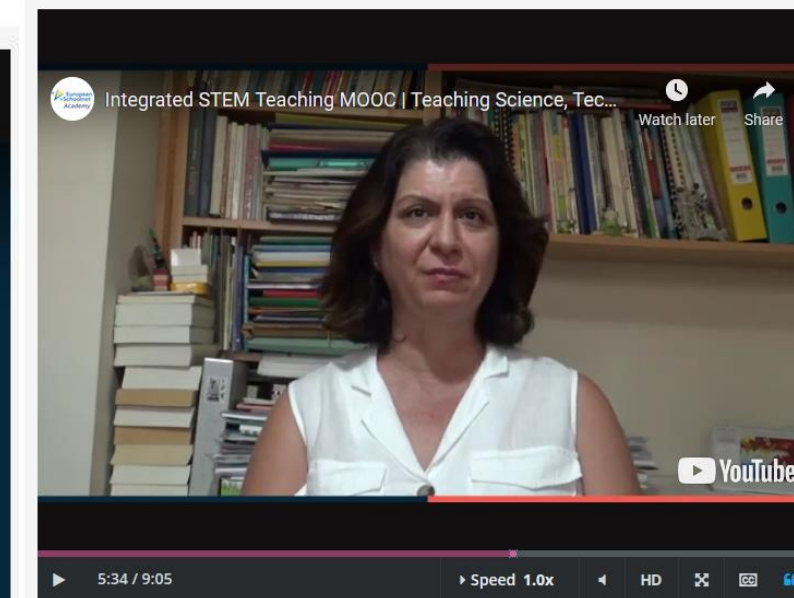
The first one is "which are the living conditions in the Earth to make it habitable?";

and the second one "Where could humans live in case living conditions on Earth be less friendly?";

To achieve this aim, different mathematical, scientific data, and articles were chosen.

At the same time, four subjects were meaningfully integrated.

To start with, Science was chosen since students could explore the concept of gravity.



to query evidence through several resources and tools, unfamiliar sometimes to them,

or to infer, draw conclusions. And these were the skills and processes that we considered necessary for students to practice

so that they would be able to tackle challenges and real-life problems that could affect human beings in the future.

What worked perfectly well was firstly that all three of us were positively disposed towards STEM education

from the very beginning since we knew that this project would be a great opportunity for professional development.

Secondly, the fact that we are coming from different backgrounds, expertise,

and school experience, gave an insight into our collaboration.

Thirdly, we must admit that our communication skills are excellent, so the team rocks!

Well, under the unexpected circumstances that we all had to face the last few months due to COVID,



that, in the process, affected our teaching skills in a positive way.

Exchanging ideas, reflecting upon what worked and what didn't work in one's class, and helping each other was an asset for our team.

Concerning the students, one thing that worked perfectly well concerns the way the inquiry method worked in the first lesson

of our teaching scenario, through which we managed to attract student's interest, which is very important for the lessons to go well.

Secondly, the lesson scenario itself was interesting and challenging enough for our students.

Thirdly, engaging students into a variety of challenging activities, among which a meaningful writing activity

at the end of the learning scenario, so that they could reflect upon the scenario as specialists,

was something that also helped the whole research process.

Download the Integrated STEM Teaching Science, Technology, Mathematics, Language and Arts LS

[Bookmark this page](#)

[VIEW UNIT IN STUDIO](#)

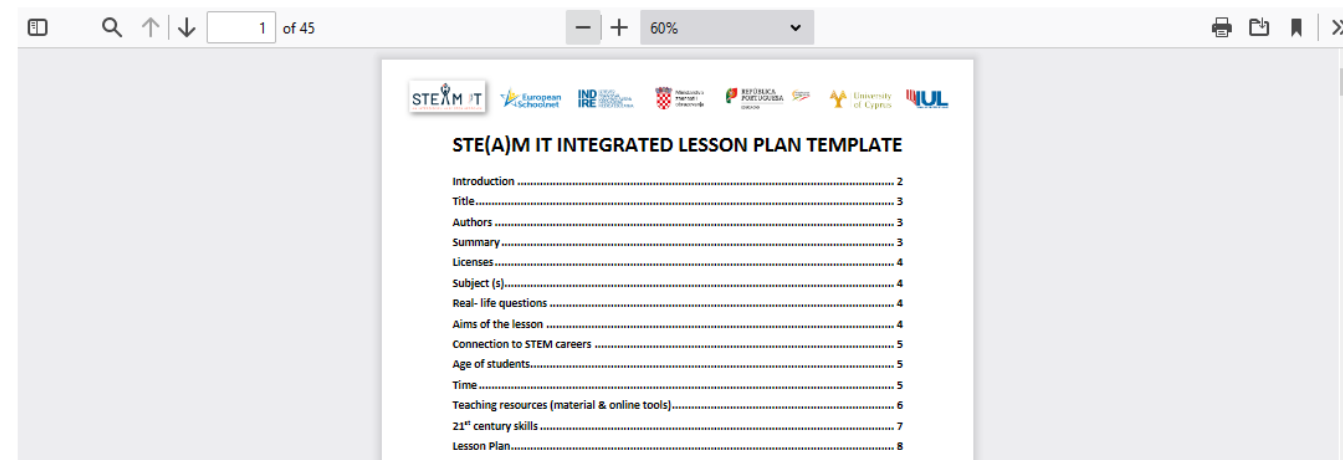
Activity: Bringing Space research in your classroom

[Bookmark this page](#)

In the Padlet below please provide a brief description on how you would approach this topic by subject by another, and justify this choice.

Reflect on how you can introduce your students to space research and education. Here is

- Find relevant resources (you can always search [Scientix repository](#))
- Pick some relevant activities/games
- Choose a movie or documentary



GIN Partnership stable + 95 - 3mo

Bringing Space research in your classroom



Provide a brief description on how you would approach this topic with either different activities or by replacing one subject by another, and justify this choice.

I use google earth	maps	ÖzgeA from Istanbul I would definitely show students a movie to motivate them and then make activities related to space.	Veysel KIRIŞAN Google maps	I used google earth
seda	Gülbahar Google earth		Isabela ,Romania Google Earth	Serap Denizli We can handle environmental issues.
Murat, Turkey Google Earth and Expeditions very useful.	Dilek TURKEY I would use Google Earth and youtube.	Seza, Turkey http://www.scientix.eu/resources/details?resourceId=28038 http://www.scientix.eu	Konstantina, Greece Mars 2021 people In Mars	http://www.scientix.eu/resources/details?resourceId=28168
SARITHA,INDIA I suggest the students to use googlemat.	Laura Javoršek, Slovenia		BINDU	

ΙΣΤΟΣΕΛΙΔΑ ΚΑΙ ΑΛΛΕΣ ΔΡΑΣΕΙΣ


- ΕΜΦΑΣΗ ΣΕ ΕΠΑΓΓΕΛΜΑΤΑ ΠΟΥ ΒΑΣΙΖΟΝΤΑΙ ΣΤΙΣ ΘΕΤΙΚΕΣ ΕΠΙΣΤΗΜΕΣ
- ΔΙΑΓΩΝΙΣΜΟΙ ΚΑΙ 2021 STEM DISCOVERY CAMPAIGN

ΚΥΡΙΑ ΙΣΤΟΣΕΛΙΔΑ → [HTTP://STEAMIT.EUN.ORG/](http://steamit.eun.org/)


THE PROJECT | TEACHERS COMMUNITY | CAREER ADVISORS NETWORK | OUTCOMES | COLLABORATORS | 

MEET THE STE(A)M IT LEADING TEACHERS


The STE(A)M IT project is working with 33 leading teachers, members of the STE(A)M IT focus group. Together, they are helping design the first Integrated Learning Scenarios, pillar of the [STE\(A\)M IT teachers community](#).




**Ivana
Gugic**
Croatia




I believe that projects like STE(A)M IT is the type of education our students need. Being part of the project helps shifting my teaching from a




**Barbara
Mandusic**
Croatia




Participating in the STE(A)M IT project as one of the lead teacher is a great honour for me, but also a challenge!




**Zoe
Michael**
Cyprus




STE(A)MIT is a challenge for me! A new approach for STEM Education that I am happy to be involved!




**Nikolas
Nikolaou**
Cyprus



STEM is important because it pervades every part of our lives! It can be also fun for students if they know the reason why they are working



**Carmelita
Cipollone**
Italy



The STE(A)M IT project is an opportunity to experience and disseminate teaching approaches that can significantly contribute in

<http://steamit.eun.org/teachers-community/leading-teachers/>

ΣΕΛΙΔΕΣ ΑΦΙΕΡΩΜΕΝΕΣ ΣΕ ΠΡΟΦΙΛ ΕΠΑΓΓΕΛΜΑΤΙΩΝ

- **Raise awareness** on the skills needed in the STEM careers
- **Career sheets** depicting STEM job profiles and real-life examples
- **Target group**
 - Teachers and career advisers
 - (students)



STEM Careers and Skills of the Future
Career sheet: Career title

STEM IT **STEM Alliance**
Innovative Education & Industry

Instructions to the expert (will be deleted)
This career sheet serves as an awareness-raising tool for teachers and career counsellors. It will be used in connection to the STEM Alliance webinar, in which you kindly agreed to participate, but also in career repositories of EUN projects, such as STE(A)M IT. Answering the questions in this career sheet, will also help you prepare for the webinar, as some of the questions will be asked by the webinar's moderator. The final career sheet will be two pages long, so there is no need to write a lot to each of the questions below.
If you agreed to share images, it would be great if you attached to the email you send back to us some photos that illustrate your career and job. For example, these photos could be about:

- Your daily working environment
- One thing you work with / that is important in your job
- Something that / someone who (please be aware of GDPR) inspired you to pursue this career

Many thanks again for taking part in this STEM Alliance webinar and for sharing your experience on your job and career. Your involvement can make a real impact on inspiring young people to follow STEM studies and careers!

Career Sheet: Your Career Title

YOUR NAME (YOUR POSITION, COMPANY)
Please share a short biography. This should be some information regarding who you are, what you studied, where you work and what are you doing now (5 sentences max)

OVERVIEW OF THE JOB
Please provide a short overview of your job and its relation to STEM. What is your current job? What is the field about?

WHAT INSPIRED YOU
Who or what inspired you to follow this career path / start this job?

TYPICAL WORKING DAY
What does your typical working day look like?

COORDINATOR
European Schoolnet

PREMIUM PARTNERS
ANIK, CERN, E.ON, IBM, Microsoft, Oracle, SAP, Siemens, Sony, Volkswagen, Zinnov

GENERAL PARTNERS
ARM, Bosch, Daimler, Intel, Johnson & Johnson, LEGO, Mercedes-Benz, Philips, Renault, SAP, Siemens, Sony, Volkswagen, Zinnov



STEM Careers and Skills of the Future
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STUDY & CAREER PATH
Please give an overview of your study path and how did you get into this career? If you could start all over again, how you would change the career path?

KEY SKILLS
What are the professional & personal key skills needed to do your job?

CAREER PROSPECT
What types of jobs & industry sectors can you work in, with your skills?

CHALLENGES
What are the main challenges in your job?

YOUR ADVICE TO STUDENTS
What is your advice to students?

YOUR ADVICE TO TEACHERS AND PARENTS
How can teachers and parents support their students / children?

LEARN MORE
Here you can share links to the external resources (YouTube, Twitter, etc.) / webpages related to the career profile.

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ΣΕΛΙΔΕΣ ΑΦΙΕΡΩΜΕΝΕΣ ΣΕ ΠΡΟΦΙΛ ΕΠΑΓΓΕΛΜΑΤΙΩΝ

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ΤΑ ΠΡΟΦΙΛ ΕΠΑΓΓΕΛΜΑΤΩΝ ΣΤΗΝ ΙΣΤΟΣΕΛΙΔΑ STE(A)M IT

Repository of STEM Jobs Profile: <http://steamit.eun.org/category/stem-careers/>



The screenshot shows the top navigation bar of the STEAM IT website with links: THE PROJECT, TEACHERS COMMUNITY, CAREER ADVISORS NETWORK, OUTCOMES, and a search icon. Below the navigation bar is a dark blue header with the text 'Space Mission Specialist' and 'Published by Vanessa James on 13/03/2020'. The main content area has a white background with the title 'Being a Space Mission Specialist' and a subtitle 'EVERYTHING YOU NEED TO KNOW ABOUT'. Below the title is a paragraph describing the role of a Space Mission Specialist. At the bottom, there is a video player with a play button and a title 'What it takes to become a Space Mission Specialist'.

The screenshot shows the 'SKILLS' section of the STEAM IT website. The title 'SKILLS' is at the top, followed by a subtitle 'Find out about the key skills to become a Space Mission Specialist'. Below this, there are six skill categories arranged in a 2x3 grid: 'Knowledge of computer programming and technologies', 'Critical Thinking', 'Complex Problem Solving', 'Operation Monitoring', 'Quality Control Analysis', and 'Systems Analysis'. Each category has a brief description of the skill.

ΔΙΑΓΩΝΙΣΜΟΙ STE(A)MIT & 2021 STEM DISCOVERY CAMPAIGN

<http://www.scientix.eu/events/campaigns/sdc21>

STEM Discovery Campaign activities' and actions' map



STEM Alliance & STE(A)MIT Competition 2021

STEM PROFESSIONALS GO BACK TO SCHOOL

<https://bit.ly/SDC21-competition>

SUBMIT YOUR ENTRY UNTIL 30 APRIL 2021

JOIN THE STE(A)MIT COMPETITIONS 2021

#STEAMIT_project #SDC21

SUBMIT YOUR ENTRY UNTIL 30 APRIL 2021

<http://steamit.eun.org/steam-it-competitions-2021>

- 1 Test the benefits of integrated STEM education
- 2 Introduce STEM careers to your students
- 3 Submit your Learning Scenarios, Stories of Implementation, Career Sheets



ΔΗΜΟΣΙΕΥΣΕΙΣ

Publications

Welcome to the publication section of the STE(A)M IT project! On this page, you will be able to find the resources created in the framework of the project, such as articles, brochures, guidelines, leaflets, reports and most importantly, the 1st integrated STEM Framework.

HOW TO PRESENT STEM JOBS IN CLASSROOMS

A STE(A)M IT Guideline for teachers
(Deliverable D4.2)

GUIDELINES ON HOW TO PRESENT STEM JOBS IN CLASSROOMS

By **Agueda Gras**, 2 months ago



INTEGRATED STEM TEACHING STATE OF PLAY

By **Vanessa James**, 9 months ago

Search ...



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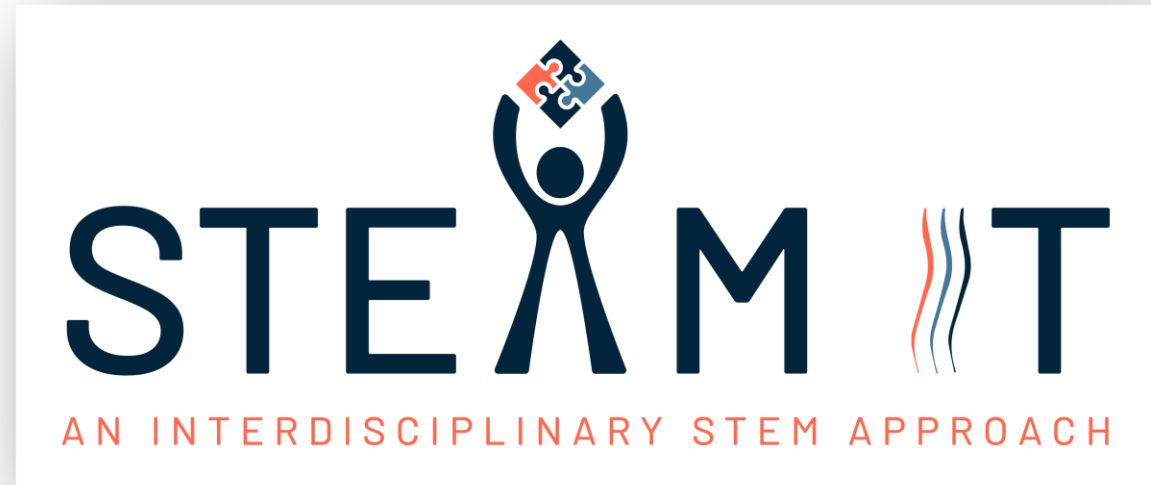
@eu_schoolnet

Science Teachers in Europe

Integrated STEM Teaching
for Primary Schools

ΔΗΜΟΣΙΕΥΣΕΙΣ

Όλα τα αποτελέσματα του project είναι διαθέσιμα από την ιστοσελίδα → <http://steamit.eun.org/category/publications/>



#STEAMIT_project