GSO4SCHOOL
Newsletter #1

November 2021

http://www.gso4school.eu/

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Leverage students' participation and engagement in science through art practices

GSO4SCHOOL aims to create a **network of school students and teachers to work together and develop trans-disciplinary activities in science and arts**, based on the already existing initiative the Global Science Opera. "The Global Science Opera for School: Leverage students' participation and engagement in science through art practices" (GSO4SCHOOL) will contribute to the engagement of school students and teachers in a range of cultural, educational and scientific disciplines. The main priorities of the project are:

- GSO4SCHOOL is an inclusive school education initiative.
- GSO4SCHOOL involves and engages teachers and school students in the development of 2 main performances.
- GSO4SCHOOL promotes the cross-sectoral collaboration (teachers, students, young researchers, artists, creative industry) and involves them in truly engaging activities.

Visit GSO4SCHOOL website: http://gso4school.eu/

GSO4SCHOOL has been funded within the framework of the European Union Erasmus+ programme

The GSO4SCHOOL Approach

Written by Menelaos Sotiriou, Photos: Science View

GSO4SCHOOL aims to enhance teachers' professional development by providing them with an alternative approach to implementing creative and innovative science and arts education practices in schools.

For the purposes of achieving the goals set by GSO4SCHOOL, existing pedagogical approaches representing the state of the art in STEAM are further developed through the rationale of Design Thinking. The Global Science Opera (GSO) initiative crystallized as a good practice in the CREAT-IT project (http://creatit-project.eu/). The practice was then implemented as a demonstration of the CREATIONS project (http://creations-project.eu/), and provided a focus for research in the Norwegian Research Council's iSCOPE project. Each year, a GSO production has been implemented thus far (2015-2020).

The interdisciplinary environment enabled through interaction of science and arts education represents a specific approach to creativity which we detail in this document. This approach to creativity in the classroom constitutes a strong advantage towards enhancing STEM education and, thus, addressing inequality in science learning. In recent years the trend is to include the "A" in STE(A)M education, thus placing a strong focus on interdisciplinarity (UNESCO, 1986, Klein, 2006). By doing so, the project will foster the development of school students' interest, participation, motivation and performance in science while simultaneously aiming for a quality process in the arts. We argue that the "quality of the experience" is often more influential than the "content that is taught". So, the engagement of school students in developing their own performances based on scientific concepts and experiencing the whole procedure supported by their teachers, is key to success. Moreover, GSO4SCHOOL's framework promotes the acquisition of 21st century skills (including social and emotional intelligence skills, teamwork, critical thinking, creativity, soft skills and entrepreneurial skills) (OECD 2015), science (analytical thinking, inquiry-based learning) and culture and the arts (performing arts of the disciplines music, drama, visual arts).

In the framework of the project we are aiming to initiate an informed debate regarding collaboration between Art and STEM at curricular level in schools.

To reach the full potential of the above-mentioned pedagogical principles, the GSO4SCHOOL project will use the **Design Thinking methodology** in order to bring innovative and entrepreneurial aspects into the science and art disciplines. The idea is to combine the design thinking methods in order to integrate into the formal, informal and non-formal settings the aspects of "ideas become reality". **Design Thinking is a design methodology that provides a solution-based approach to solving problems.** It is useful in tackling complex problems that are unknown, by understanding the human needs involved, by re-framing the problem in human-centric ways, by creating many ideas in brainstorming sessions, and by adopting a hands-on approach in prototyping and testing. Design Thinking is in line with the proposed steps that GSO4SCHOOL will follow during the project, which are inspired by the OSOS Open Schooling Model, namely **Feel**, **Imagine**, **Create** and **Share**.

GSO4SCHOOL will act as a facility, as a meeting place. It's a place between science, art and the society to connect all the stakeholders and draw ideas that will be realized with a common purpose, the well-being of the local/national/international community. It will **FEEL** societal needs, will explore and **IMAGINE** novel solutions for the future so to **CREATE** these within the school and **SHARE** it with the community. It's a facility designed to generate new ideas in an open and collaborative environment, to promote experimental innovation and rapid prototyping for art/science-related projects.

Prior to designing and developing such an experiment, we have identified five main categories of commonality between STEM and Art. This is essential to ensure authenticity in our approach and appropriate justification for implementing the project in and with schools. The five categories are: modes of inquiry; fields of study; experimentation; creativity and imagination; aesthetic experience and artistic attitude. The GSO4SCHOOL approach brings together all these characteristics in an integrated activity in a way which constitutes a natural learning environment for young students.

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The GSO4SCHOOL Approach

Written by Menelaos Sotiriou, Photos: Science View

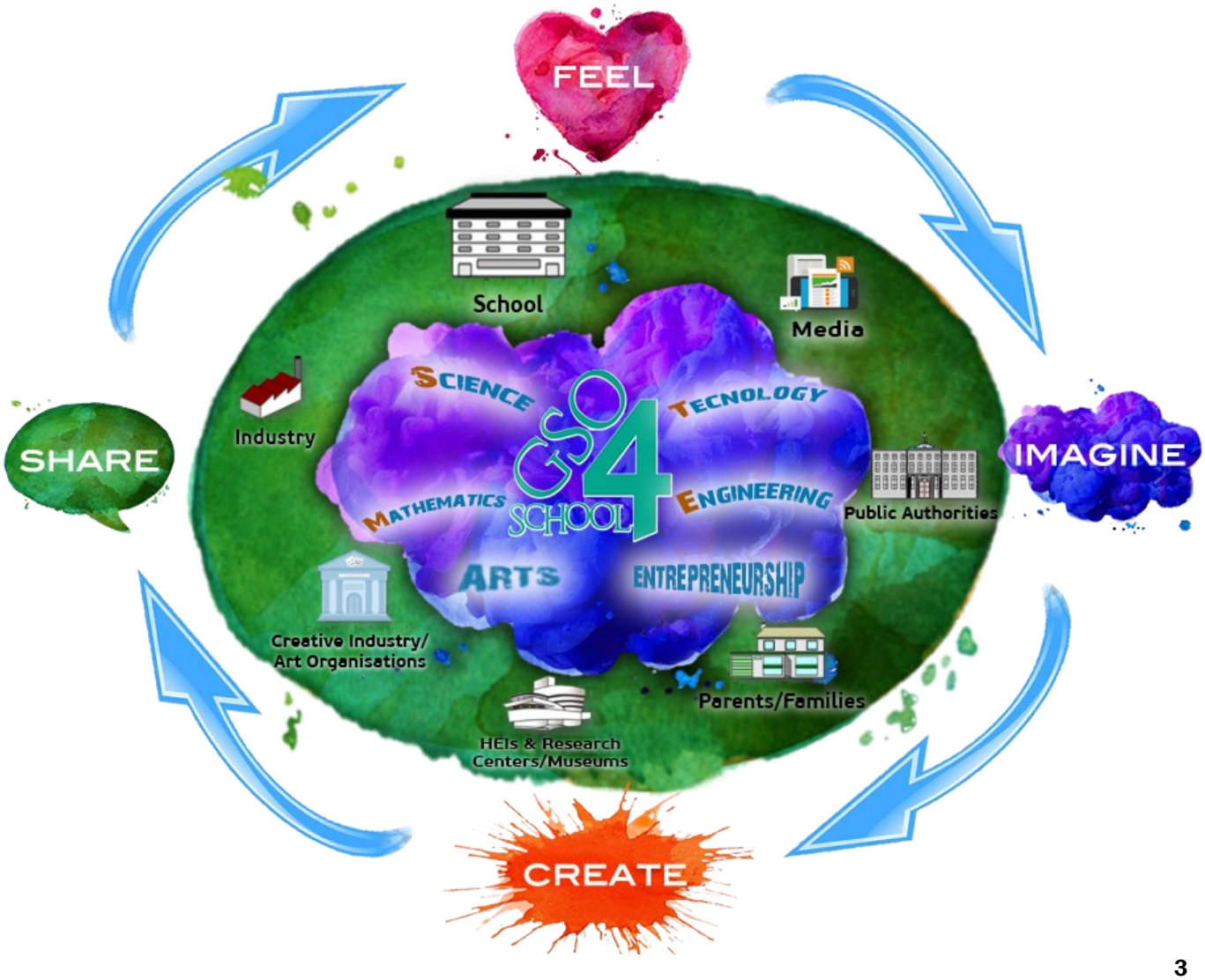
The GSO4SCHOOL approach guides students to develop their projects following a four-phase process:

FEEL: Students identify problems in their classrooms, schools, and communities. Students observe problems and try to engage with those who are affected, discuss their thoughts in groups, and vote on ideas.

IMAGINE: Students envision and develop creative solutions that can be replicated easily, reach the maximum number of people, generate change, and make a quick impact.

CREATE: Students collaborate in classroom in order to develop a plan of action to effect change. This includes planning, implementing, and later recording the process.

SHARE: Students submit their work to GSO4SCHOOL through the development of specific scenes that will be integrated in the rest of the GSO production. At local level they could share their work with their classmates and students of the school, as well as with parents and external stakeholders and are encouraged to do so with other schools in the community and local media.



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Global Science Opera Premiere 2021

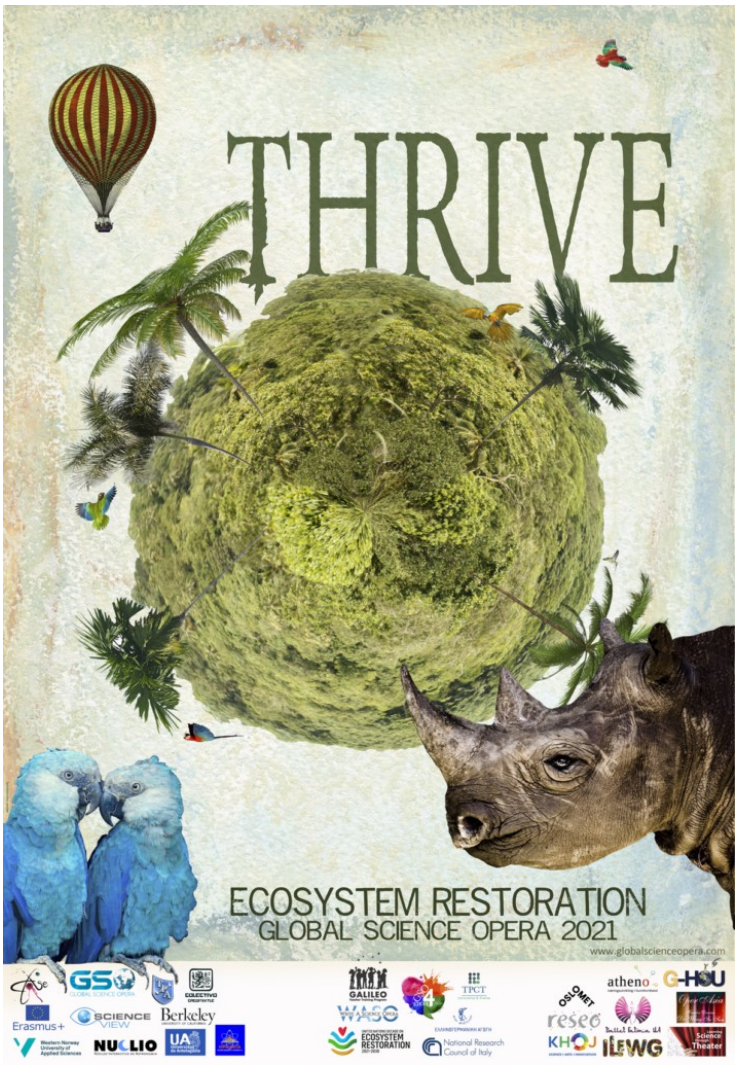
Thrive – the Global Science Opera 2021

The Global Science Opera production in 2021 is inspired by the UN Decade on Ecosystem Restoration. The opera will premiere worldwide on World Children's Day, Nov. 20th, 2021, which is the official date for our annual premieres in celebration of that day.

The opera, **"Thrive!"** is a story that takes you around the world on a quest where you will discover the beauty and uniqueness of the different ecosystems. Each new place we visit, we meet a diversity of animals, plants and people and see how they interact, depend on and influence each other. And we find clues that will help us on our common quest for a sustainable future and possibly a mysteriously missing grandfather...

We are proud to share that the UN Decade on Ecosystem Restoration has provided "Thrive" with a warm letter of appreciation, and has wished us the best of luck for the opera production!

See further details at https://globalscienceopera.com/productions/thrive-2021/



Photos: Global Science Opera

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International Conference

STEAM Approach in Science Education

2021

6-8 December, Virtual Even

https://www.the-next-step.eu/next-step-conference/

The International Conference on "STEAM Approach in Science Education" is jointly organised by the NEXT STEP and GSO4SCHOOL projects. Join us for 3 days, from the 6th to the 8th of December. The Conference is going to be an on-line event.

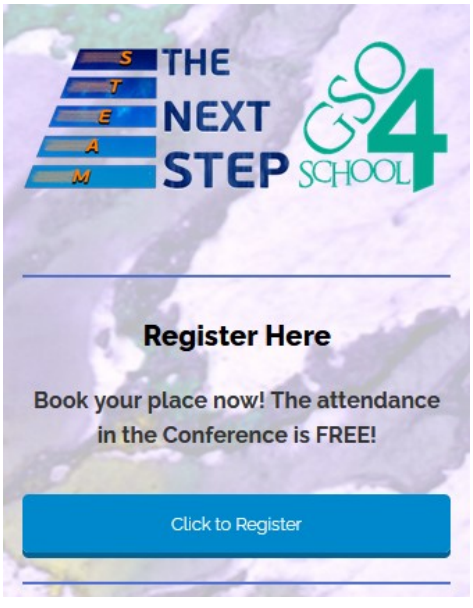
The **2nd STEAM Approach in Science Education Conference** will build on the results of the 2020 conference. Will be an international meeting point for educators, scientists, artists, researchers and policy-makers during which cutting-edge perspectives on creativity in school education will be presented and further developed. The conference will be an exciting and enjoyable occasion for educators to gain valuable experience with specific Professional Development approaches to science-and-art (STEAM) methodologies through hands-on experiences, lectures and intensive, interactive workshops.

Participants will have opportunities to **access the NEXT STEP and GSO4SCHOOL projects' training materials** while engaging in dialogue with the materials' developers from **Norway**, **Greece**, **Portugal**, **Ireland**, **Cyprus** and **Italy**.

During the conference, ideas for new Erasmus and other EU initiatives will be discussed. Participants will gain access to specific know-how regarding how to develop further creative education initiatives into funded projects, including guidance for the procedures involved in that process.

Participants will also have the opportunity to become acquainted with the educational frameworks that the 2 projects are following. Teachers and artists already involved in the projects' activities will share their experiences with the conference participants.

The conference will include several workshops, presentations as well as opportunities to network and share best practices.



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