Scientix® presents:

Future-proofing STEM Education - 21st Century Pedagogies for the Planet

Isidora Salim, Project and Pedagogical Coordinator

https://theseer.scientix.eu

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Scientix, the community for science education

Scientix has been the heart of the European STEM Education Community since 2009…

… It offers the space for all people working in the field of science education (teachers, education researchers, policymakers, STEM education professionals, etc.) to exchange, collaborate, and learn from each other.

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http://www.scientix.eu

With over **10,000 teachers** involved monthly, SCIENTIX reaches more than **120,000 students** every month!

European Schoolnet

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Scientix ® is an initiative of European Schoolnet

Scientix provides

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Objectives of the SEER

- Provide a **Roadmap** to help education stakeholders mainstream STE(A)M Education in Europe
- **Focus** on Heads of School/schools, policy-makers, curricula authors and reformers, industry partners, and teachers
- Contribute **recommendations** for policy improvements
- Help stakeholders **navigate** the current STE(A)M educational resources
- Showcase and understand **good practice** in STE(A)M teaching

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STE(A)M EDUCATION EUROPEAN ROADMAP

Integrated STEM and Open Schooling

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Ioana Charaghiozov, Project Officer

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Never have I ever heard of the term STE(A)M education

I have	I haven't

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Never have I ever collaborated with a teacher from another subject for a lesson (or group of lessons)

I have	I haven't

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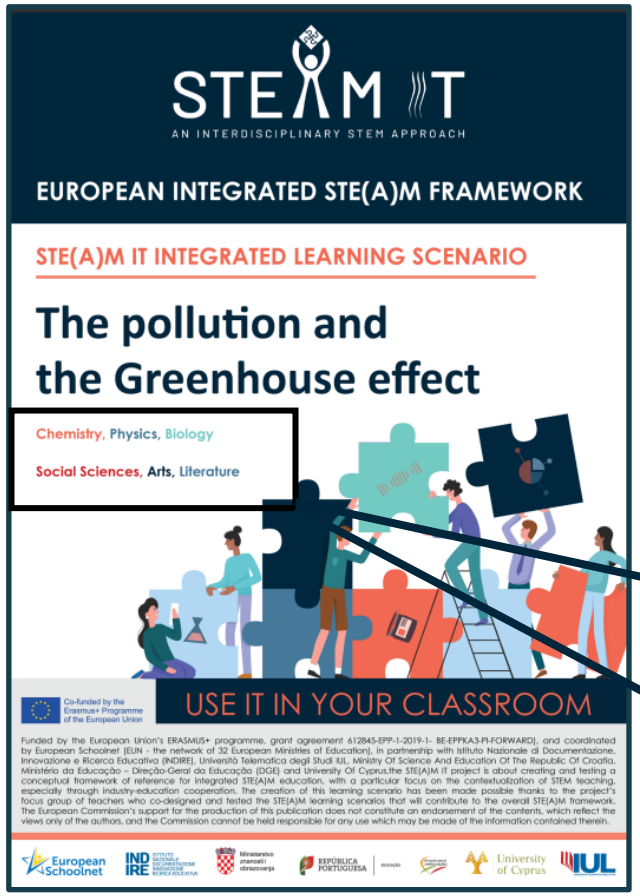
WHAT IS STE(A)M EDUCATION?



1. Subjects

- At least **TWO DIFFERENT** STEM subjects
- **ONE** STEM subject combined with **ANY OTHER SUBJECT**
- Can include Arts or Humanities or other subjects (e.g., sports)

Chemistry, Physics, Biology

Social Sciences, Arts, Literature

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Competence-based Education for 21st Century skills

2. Pedagogies:

Inquiry based science education

Problem/ Project based learning

Content and Language Integrated Learning

https://files.eun.org/STEAMIT/STE(A)M-IT-Framework-Digital.pdf

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Real World Problems to Explore STE(A)M Education:

Climate Change

Gender Equality

Responsible consumption and production

21st Century skills:

- Critical thinking and research skills,
- Creativity, imagination,
- Planning and self-direction
- Oral and written communication,
- Leadership and teamwork,
- ICT literacy,
- Economic and financial literacy
- Global awareness and multicultural literacy/ acceptance of others and empathy
- Health and wellness literacy/ public health and safety

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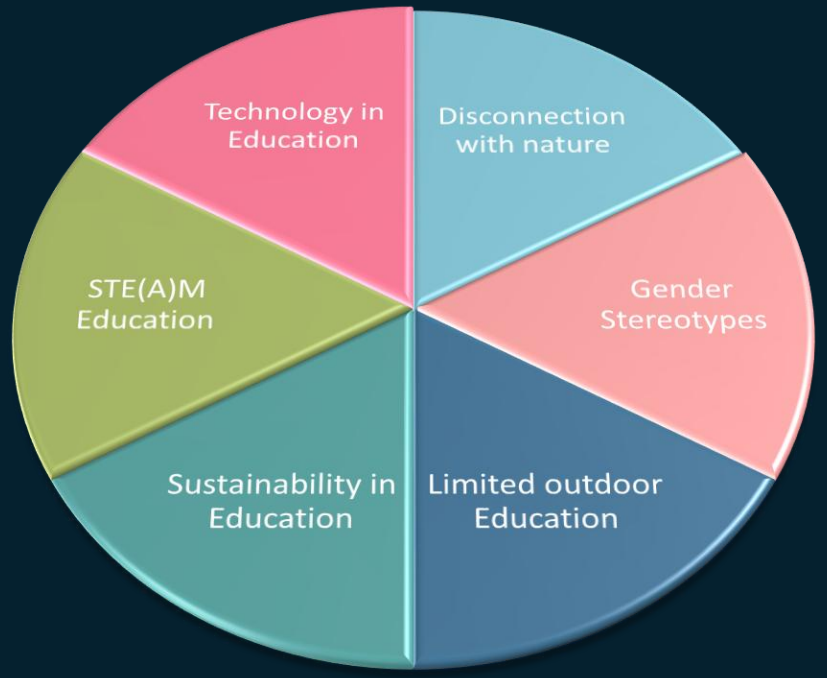
OUTSTE(A)M

OUTDOOR STE(A)M: Outdoor learning in Early Childhood Education and Care and primary schools using age-appropriate technology and the STE(A)M Approach.

OUTSTE(A)M's efforts address various challenges and concerns such as:



Upcoming:

MOOC

Toolkit

https://www.scientix.eu/community/partner-projects/outsteam

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Open Schooling

Connect schools and learners to a rapidly changing world.

Position schools at the centre of community wellbeing

Connect formal, non-formal and informal education to expand opportunities.

Dimensions of Open Schooling

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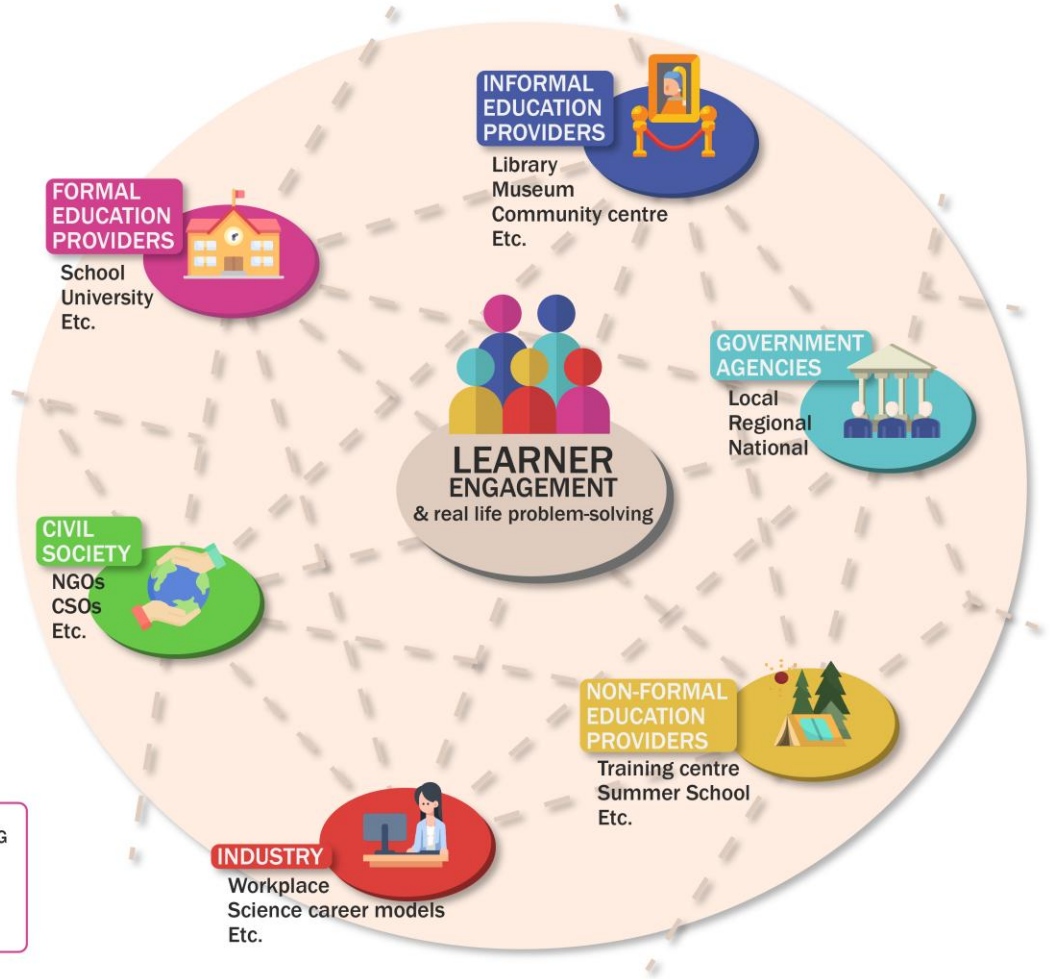
STE(A)M Learning Ecologies



Multiple science learning opportunities

Real-life problem solving situations

Co-created

Inclusive

https://www.steamecologies.eu/sles-portfolio-a-glimpse-of-real-life-stories-from-the-ground-in-13-countries/

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Growing Citizen Science in Europe

With Open Schooling and STE(A)M education, schools can become part of transnational Citizen Science communities and coalitions.

Listen to Champions, the podcast by citizen science promoters

https://crops-cs.eu/champions

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Green and Blue Education

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Miriam Molina, Project and Pedagogical Operational Manager

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Green and Blue Education for a better tomorrow

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What makes Green and Blue Education?

Competences to help students and teachers understand, care, and act for the Planet

Taking teaching and learning **outside the classroom** to embrace surroundings and nature

Contextualisation of STEM education in society, connection with global environmental challenges

Nurture the students, **citizens of today and tomorrow**

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NBS EduWORLD
GEN
LOESS
LITERACY BOOST THROUGH AN OPERATIONAL EDUCATIONAL ECOSYSTEM OF SOCIETAL ACTORS ON SOIL HEALTH
COOL SCHOOLS
NBS ACADEMY
Life Terra
BRING THE OCEAN INTO YOUR SCHOOL
ProBleu
CarbOnACT
Learn • Teach • Act
BlueLights
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CONTEXTUALISING STEM:
Environmental Sustainability

NBS EduWORLD

GEN B

NBS ACADEMY

COOL SCHOOLS

CarbOnACT

LOESS
LITERACY BOOST THROUGH AN OPERATIONAL EDUCATIONAL ECOSYSTEM OF SOCIETAL ACTORS ON SOIL HEALTH

BlueLightS

BRING THE OCEAN INTO YOUR SCHOOL

Life Terra

ProBleu

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Blue Education: topics

- **Ocean literacy** for all, with accessible resources to foster understanding
- **Restore, protect and maintain** ocean biodiversity
- **Importance of the ocean in our daily lives**, (climate, food resources, overall human well-being)

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Green Education: topics

- **Environmental sustainability** initiatives
- **Bioeconomy** careers
- **Nature-Based Solutions (NBS),** such as greening of school(yards)
- **Outdoor learning** , experiential hands-on approach, whole-school approach

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Green and Blue Education - Competences

- Learning for sustainability
- Knowledge, skills and attitudes
- Empathy, responsibility, and care for our planet

Access GreenComp in your language!

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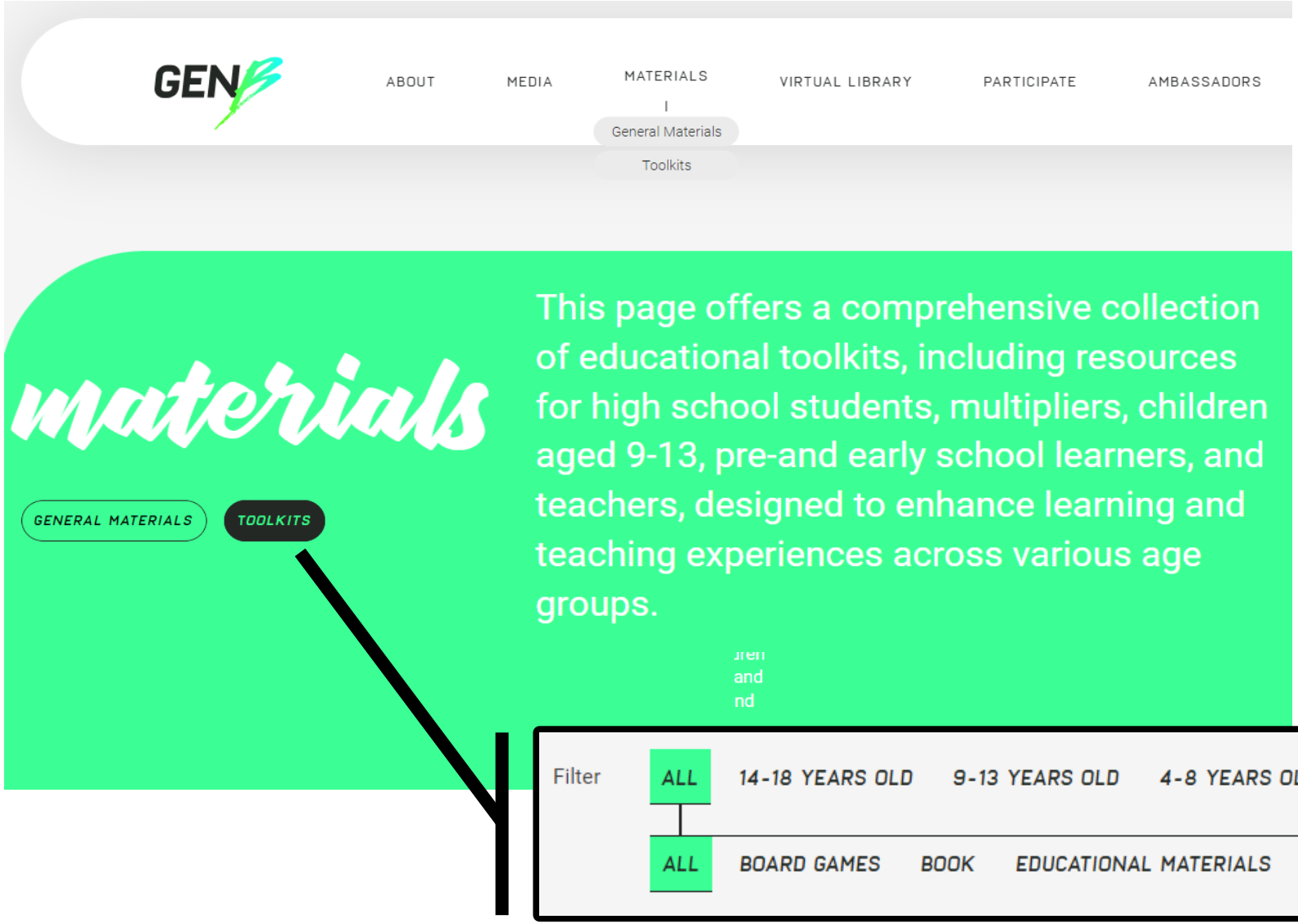
GenB toolkit



The GenB toolkits offer hundreds of resources to introduce bioeconomy related knowledge at all levels of Education.

Toolkits | GenB

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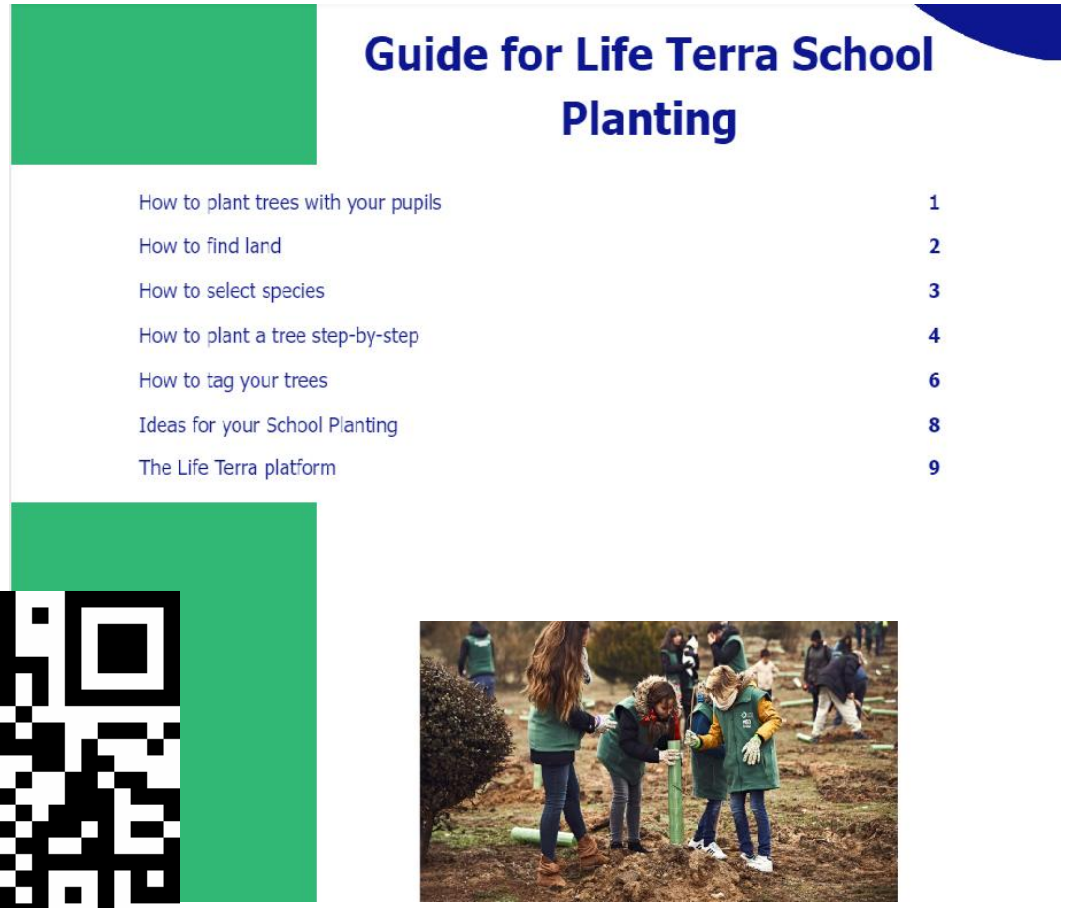
Life Terra Guide for School Plantings

The right tree, in the right place

Support school leadership, teachers, and community actors in their tree panting activities and related learning objectives



https://www.datocms-assets.com/50353/1695801142-en_life-terra-guide-for-school-plantings.pdf

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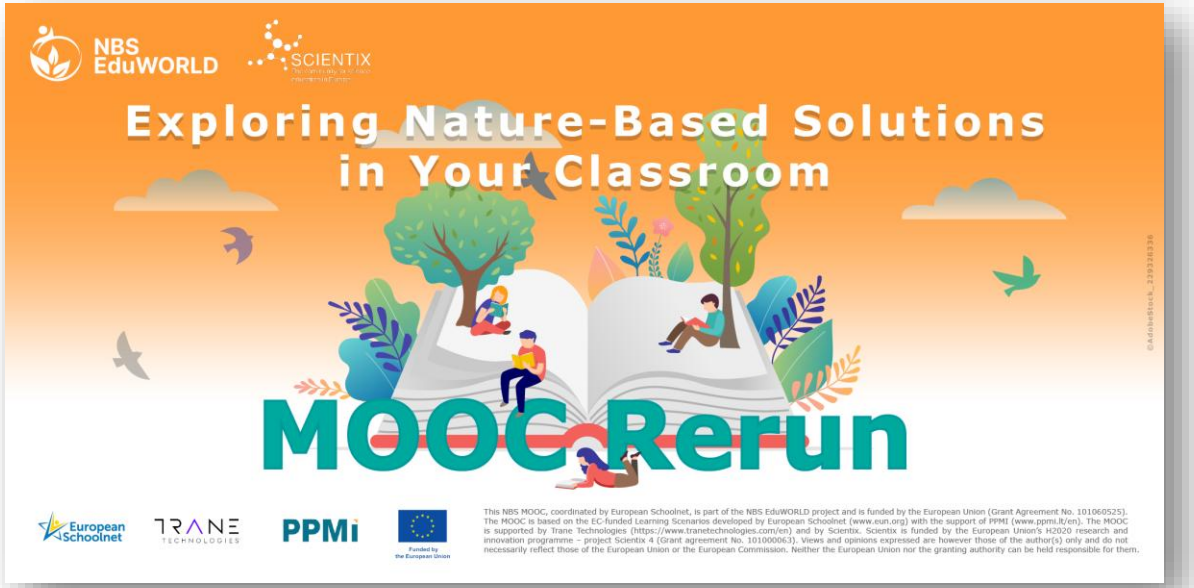
“EXPLORING NATURE-BASED SOLUTIONS IN YOUR CLASSROOM” MOOC

- Learn about NBS and teach your students
- Launched in 2025; 5 weeks; open to anyone - available in the archive here: https://www.europeanschoolnetacademy.eu/courses/course-v1:Scientix+NBS+2023/about



New MOOC coming up starting in January 13, 2025!

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New technologies help bring new and immersive learning experiences to overcome geographical barriers

Environmental literacy accessible to all.

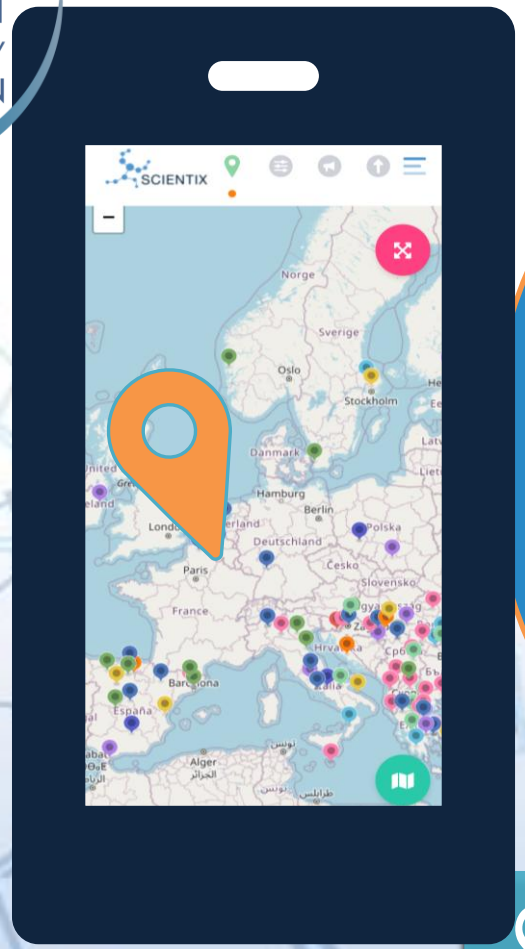
[European Atlas of the Seas]

#EU4Ocean
#Youth4Ocean
#EUBlueSchools

Technology & Ocean Literacy

THE SCIENTIX CAMPAIGNS: SHARING STEM KNOWLEDGE WITH THE WORLD, AND EACH OTHER!

SCIENTIX STEM DISCOVERY CAMPAIGN



- Scientix organises multiple campaigns all year round to showcase projects, STEM topics, events, and new resources
- Every year, the STEM Discovery Campaign puts YOUR teaching on the map by sharing your activities, lesson plans, resources, etc.
- During the campaigns, join events, webinars and workshops to get inspired and learn
- Follow the Scientix social media channels to stay up to date with the latest STEM Education development in Europe!

https://www.scientix.eu/campaigns/sdc/sdc24

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HOW CAN YOU JOIN SCIENTIX?

Register on the Scientix portal

http://www.scientix.eu/home

Subscribe to our news services

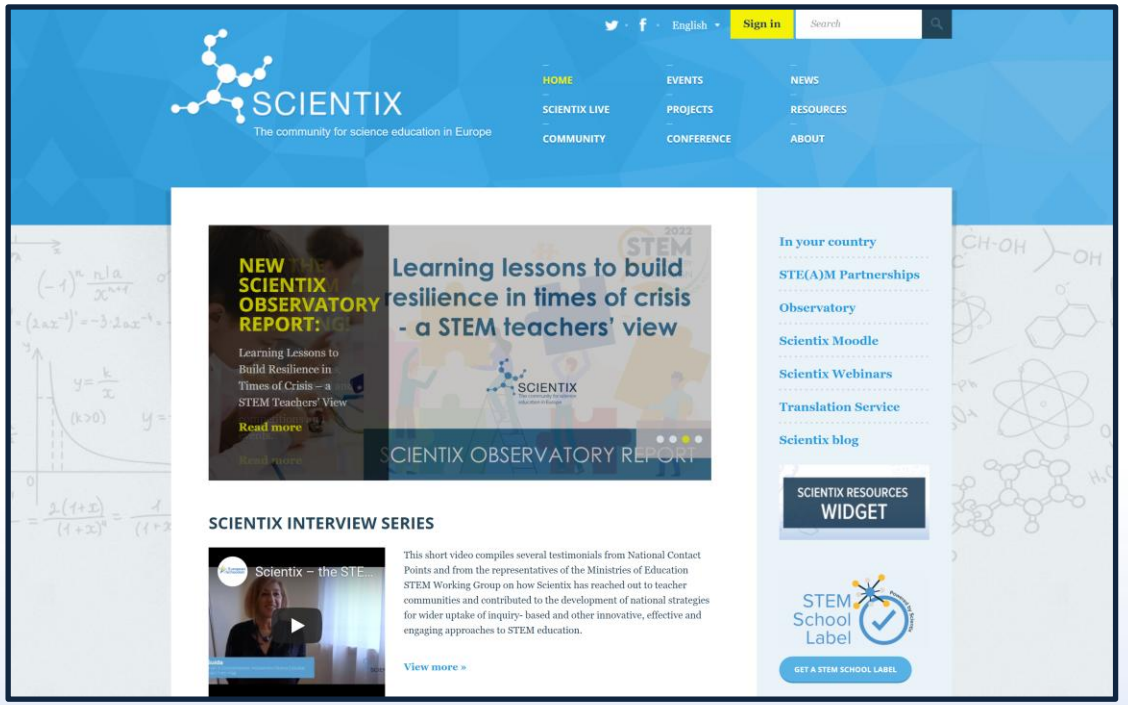
http://www.scientix.eu/newsletter

Follow us on social media

Twitter @scientix_eu

FB group "Science Teachers in Europe"

Instagram @scientix_eu



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