NBS EduWORLD Summer School

NBS School Expertise:
Unlocking Nature-Positive Excellence

Powered by NBS EduWORLD and the Scientix® STEM School Label

1 July 2024

Diego Fernández, Scientix® STEM School Label coordinator, European Schoolnet

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The NBS School Expertise is an initiative of NBS EduWORLD and the Scientix STEM School Label. NBS EduWORLD is funded by the European Union (Grant Agreement No. 101060525). The STEM School Label is a service of Scientix®, coordinated by European Schoolnet (EUN). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the granting authority can be held responsible for them.

AGENDA

- Introduction
- STEM School label: Introduction, Criteria and School Practice Evidence.
- The NBS School Expertise: Purpose, Criteria, Application.
- Group activity and presentations.
- Conclusion
- Q&A

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STEM School Label

European Schoolnet
Transforming education in Europe

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What is…

STEM School Label

?

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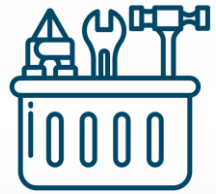
Objective

- To provide **schools** with the necessary **guidance** and **tools**...



...to engage their **students**, **teachers** and **other actors** in STEM related activities

... by developing an appropriate **STEM STRATEGY**

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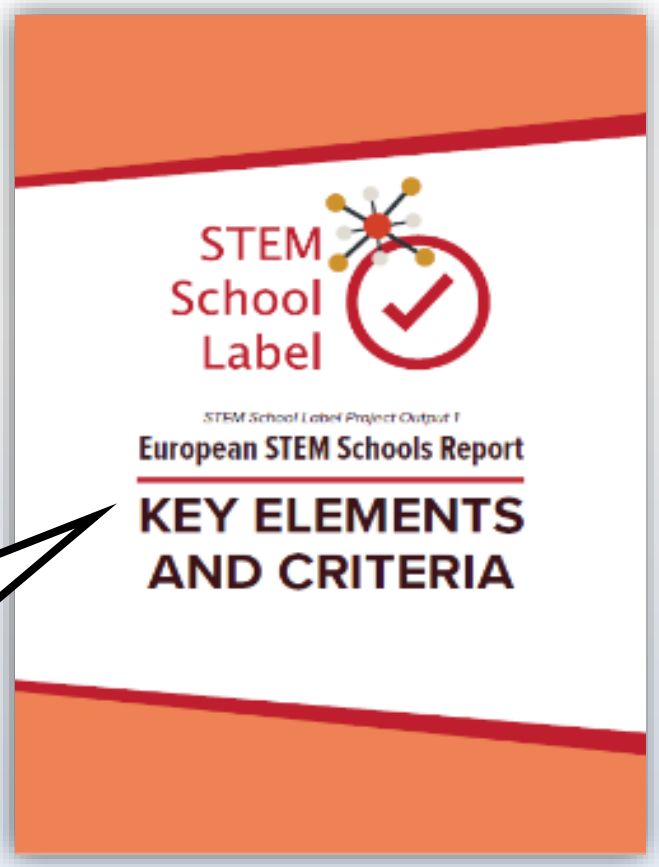
European STEM Schools Report

Jimenez Iglesias, M., Faury, M., Iuliani, E., Billon, N. and Gras-Velazquez, A. (2018) "**European STEM Schools Report: Key Elements and Criteria – Executive Report**", retrieved from http://files.eun.org/STEMSchoolLabel/STEM-School-elements_and_critera_executive_report.pdf, European Schoolnet, Brussels, Belgium.

A **STEM School** is defined as a *school with a clear **STEM strategy**, characterised **by 7 key elements and 21 criteria.***



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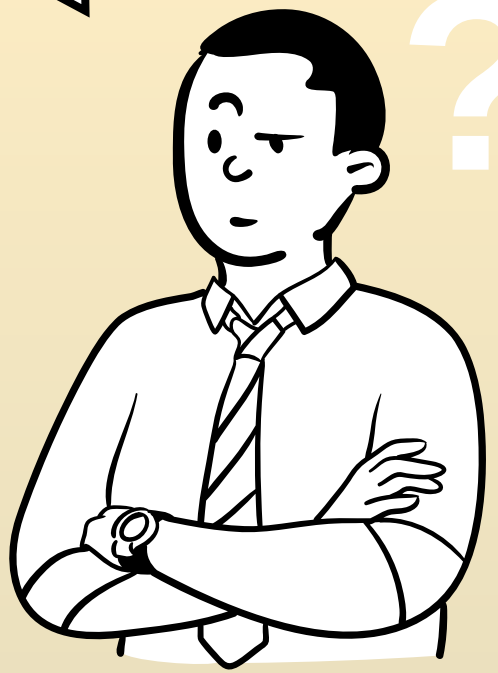
What **key elements** are essential for a school to have a **successful STEM strategy**?

What **strategies and practices** can make STEM education more **effective and engaging**?

Brainstorming:

https://www.menti.com/al4ncgwxiz5o



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STEM School Key Elements And Criteria

Instruction
- Personalisation of learning
- Project and problem-based learning (PBL)
- Inquiry Based Science Education (IBSE)

Professionalization of staff
- Highly qualified professionals
- Existence of supporting (pedagogical) staff
- Professional development

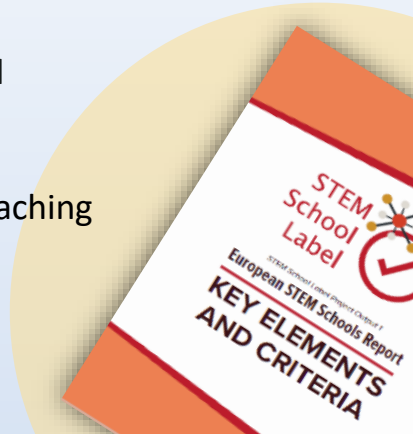
Connections
- With industry professionals
- With parents / guardians
- With other schools / educational platforms
- With universities/research centers
- With local communities

Assessment
- Continuous assessment
- Personalized assessment

School leadership and culture
- School leadership
- High level of cooperation among staff
- Inclusive culture

School infrastructure
- Access to technology and equipment
- High quality instruction classroom materials

Curriculum implementation
- Emphasis on STEM topics and competences
- Interdisciplinary instruction
- Contextualisation of STEM teaching



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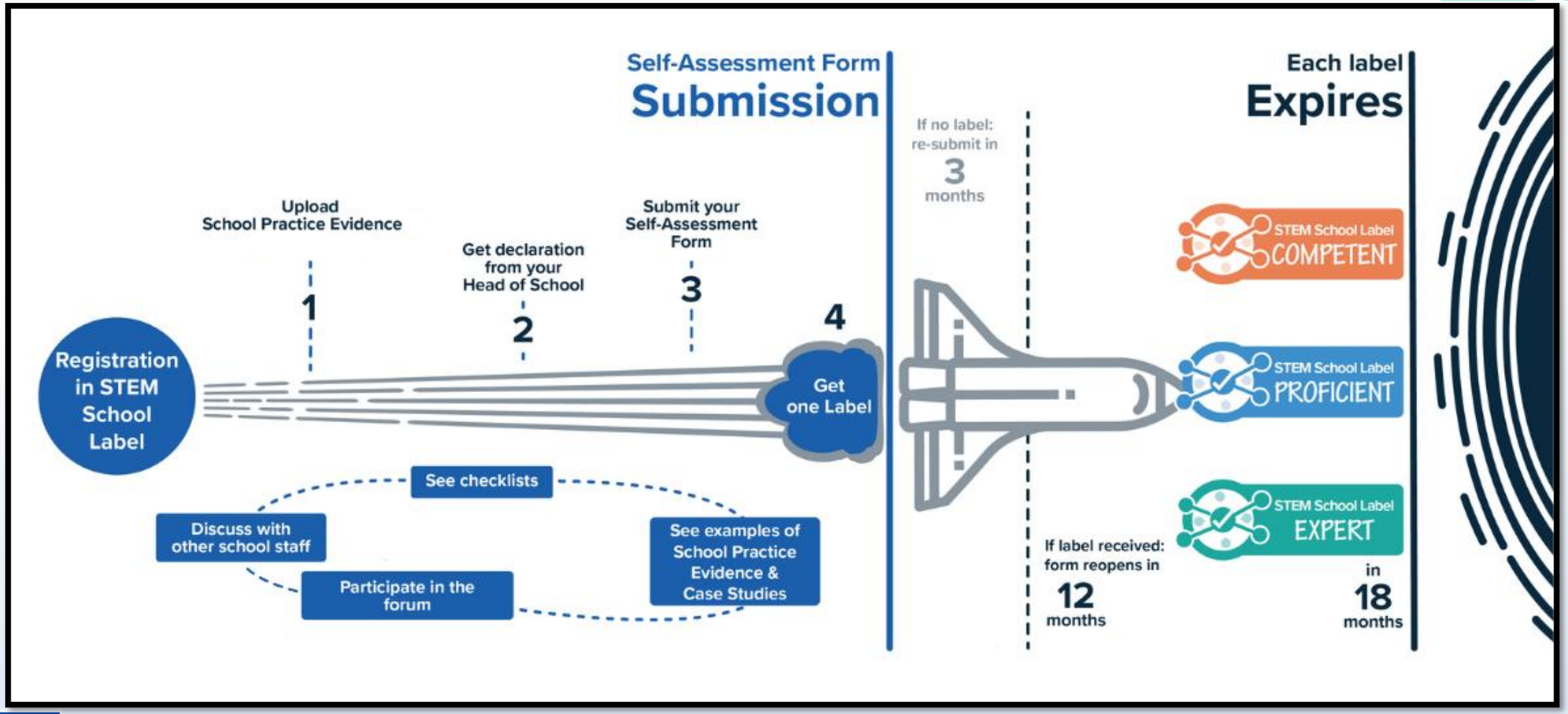

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Examples of School Practice Evidence

Title: Exploring Our Local Ecosystems: Plants and insects

Description: Students explore a local park, focusing on plants and insects. Through field observations, data analysis, and presentations, they investigate biodiversity, interactions, and environmental factors. They write all their work in a portfolio, and they present the results in front of the class.

Criteria: Inquiry Based Science Education (IBSE); With local communities; Continuous assessment; Interdisciplinary instruction.

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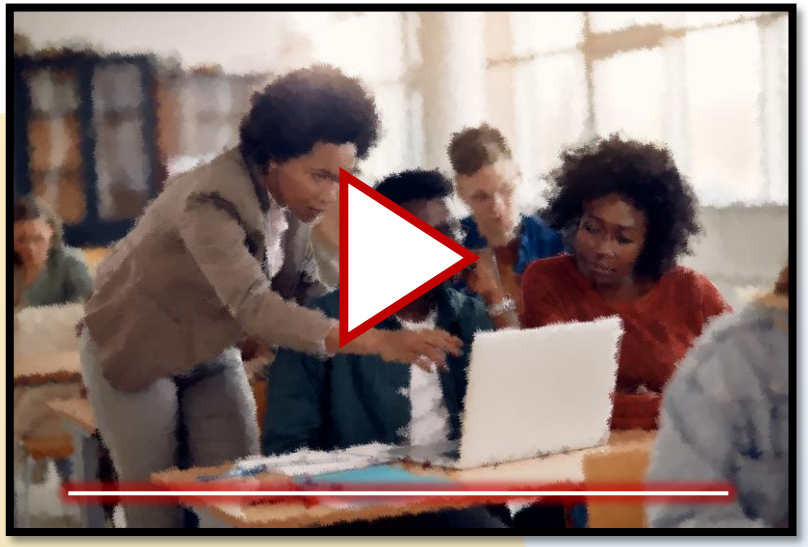
Examples of School Practice Evidence

Title: Visit to the National Institute of Statistics. Bridging Classroom Learning with Real-World Data



Description: Secondary school students visit the National Institute of Statistics, where they learn from professional statisticians and researchers. Through hands-on activities and software use, they apply mathematics concepts to analyse real-world data.

Criteria: Highly qualified professionals; With universities / research centers; High quality instruction classroom materials; Contextualisation of STEM teaching.

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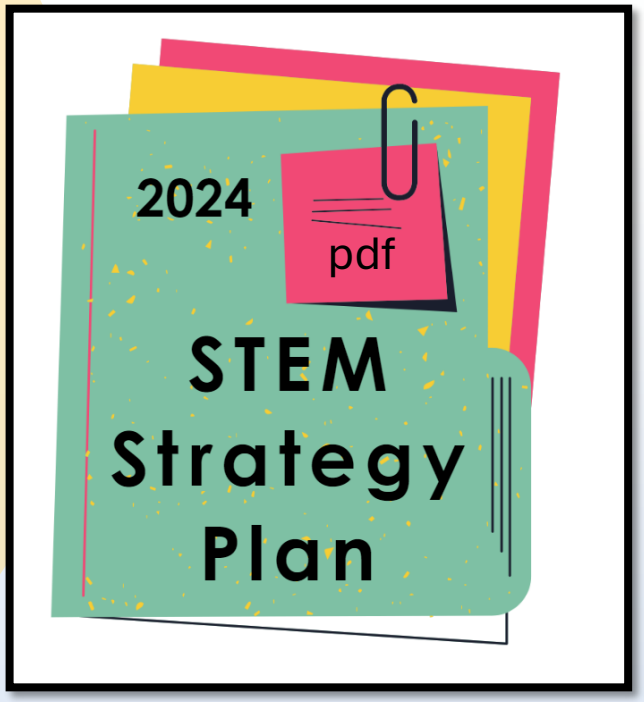
Examples of School Practice Evidence

Title: STEM Strategy Year Review and Teacher Training Plan



Description: The school leader orchestrates a review of the previous year's STEM strategy, incorporating feedback from different stakeholders to shape a plan for the upcoming course. Through collaborative discussions, teachers identify areas for improvement. Additionally, three online courses are selected to enrich teachers' pedagogical skills in STEM methods.

Criteria: School leadership; High level of cooperation among staff; Professional development.

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Examples of School Practice Evidence

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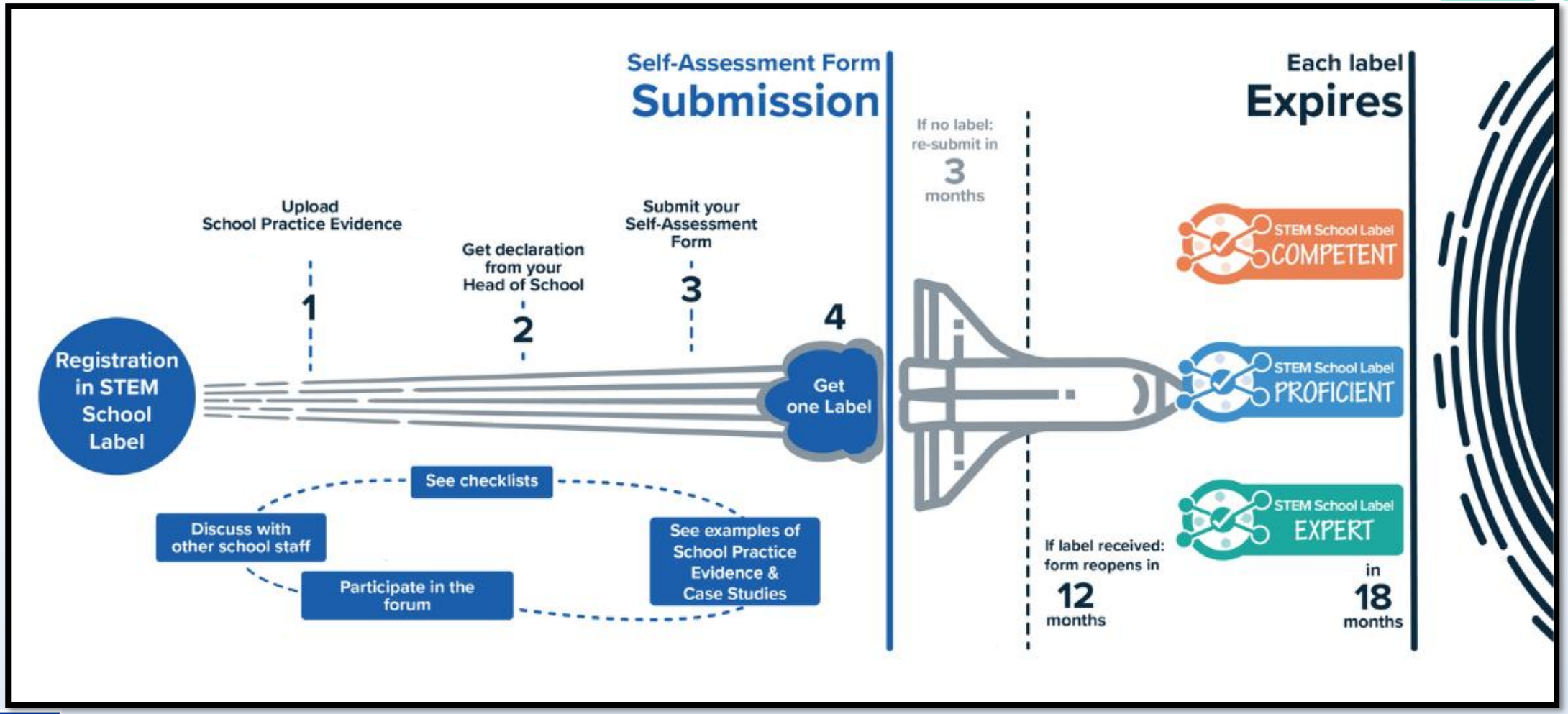

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NBS EduWORLD

STEM School Label

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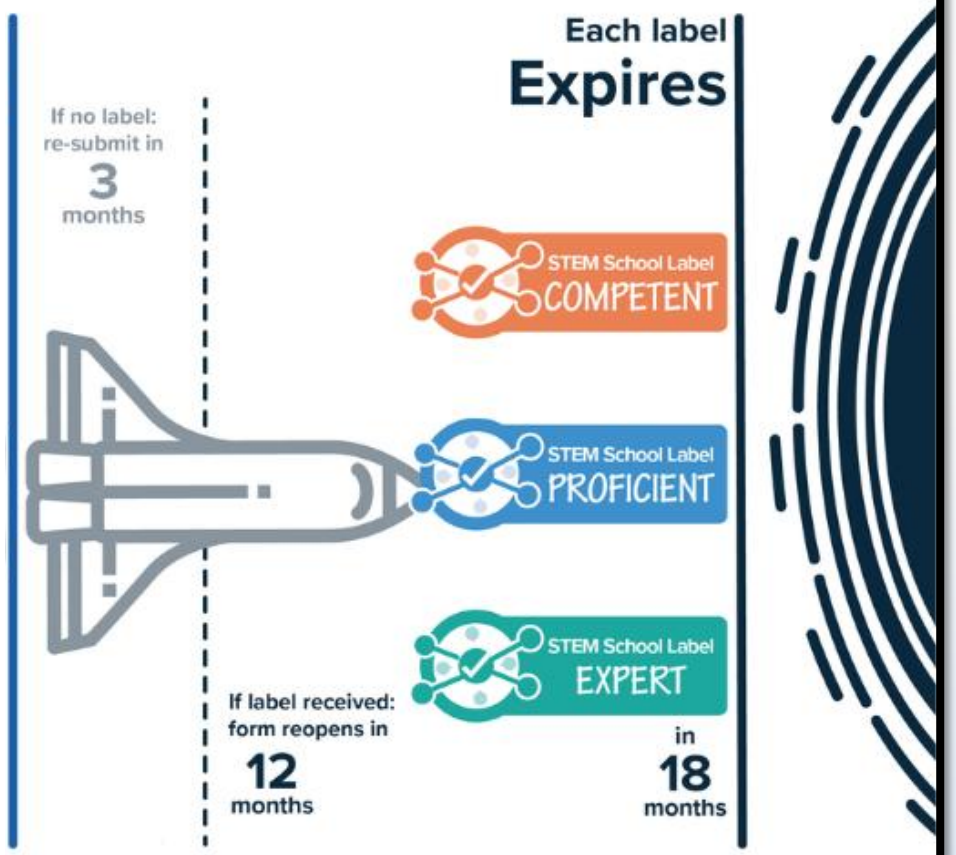
STEM School Label COMPETENT

+1200 COMPETENT SCHOOLS

from Azerbaijan, Czech Republic, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Malta, Romania, Slovakia, Sweden, Ukraine, Austria, Finland, Pakistan and Colombia.



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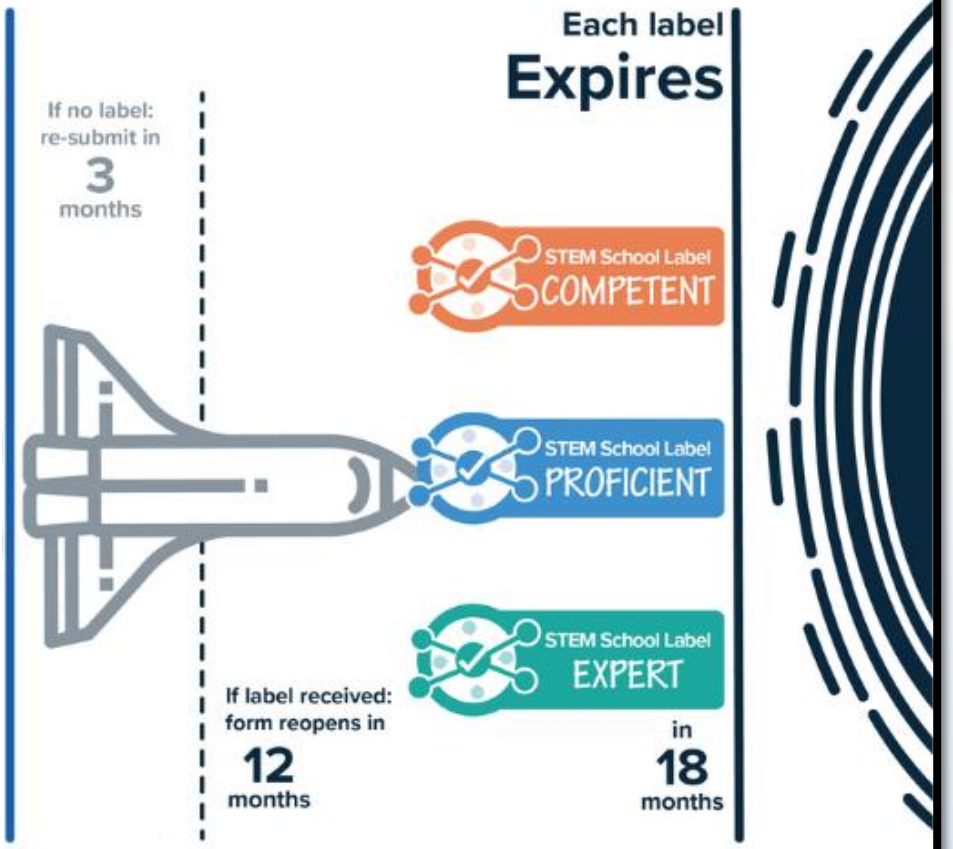
29 PROFICIENT SCHOOLS

From Belgium, Bosnia & Herzegovina, Bulgaria, Croatia, Greece, Lithuania, Malta, Poland, Portugal, Serbia, Spain, Turkey and North Macedonia.



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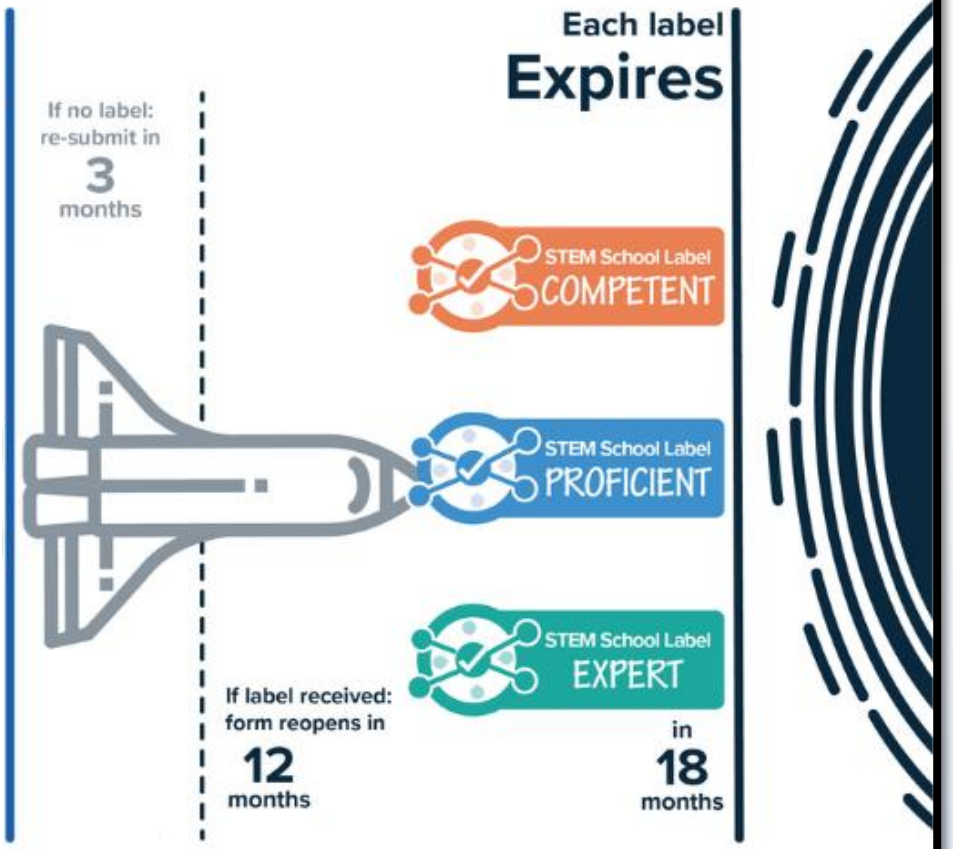
25 EXPERT SCHOOLS

from Croatia, Cyprus, Greece, Italy, Lithuania, Malta, Portugal, Serbia, Spain, Poland, North Macedonia.



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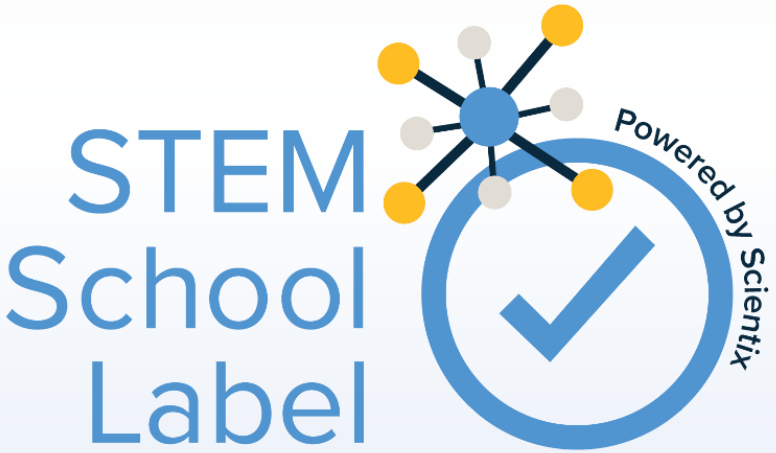

NBS EduWORLD

How is STEM School Label connected to NBS EduWORLD?

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STEM EDUCATION	+	NATURE-BASED SOLUTIONS
Project-Based Learning to address environmental issues		
Emphasis on sustainability in STEM curricula (ecological balance, resource management…)		
Interdisciplinary knowledge from biology, ecology, engineering, and environmental science…		
Prepares students for careers focused on sustainable solutions		
Involves community engagement and outdoor learning experiences		
Use engineering to create and test innovative NBS		
etc.		

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NBS EduWORLD

STEM School Label

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- ✓ Joint initiative of NBS EduWORLD and Scientix® STEM School Label
- ✓ Recognizes the level of **knowledge and commitment** of schools on the topic of **nature-based solutions** through STEM
- ✓ **Complementary** to the STEM School Label

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Purpose: To promote and highlight schools that are committed to sustainability and environmental education through practical, innovative activities.

Benefits:

- Join a community of pioneering schools
- Gain international recognition
- Showcase your best practices in NBS education

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How to apply for the NBS School Expertise

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How to apply for the NBS School Expertise

1. Publish at least 3 NBS-related School Practice Evidence.
2. Complete the NBS School Expertise Application Form online.
3. Provide SPE Links.
4. Submit Your Application!

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What criteria are taken into account?

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What criteria are taken into account?

- 21 STEM School Label criteria
- 12 GreenComp
- 12 NBS societal challenge areas

→ **NBS School Expertise Criteria**

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Group Activity: Submit a School Practice Evidence:

1. Think of an activity related to **STEM** and **NBS** at the same time.
2. Link it to the **criteria** you pick randomly from the bag:
   a. STEM School Criteria
   b. One societal challenge area
   c. At least one green competence
3. Fill in the Template.
4. Find/Describe a photo, video, or file that could be attached to your activity as an evidence.

Time to work: 30 min.

Template: http://files.eun.org/scientix/SPE.docx

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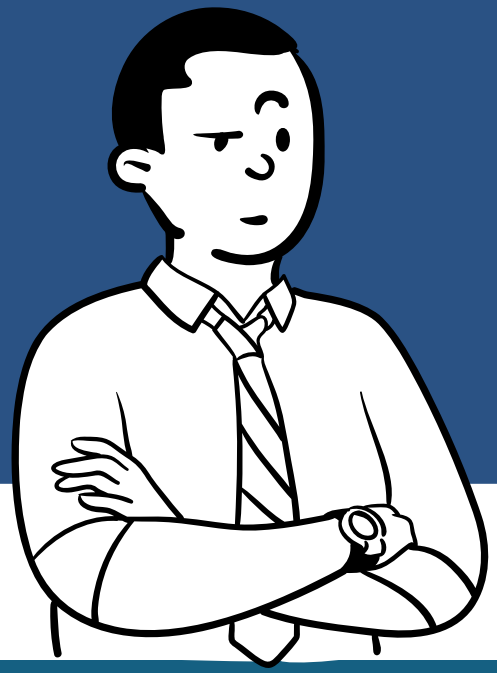
Moderation Time!

Evaluation Criteria

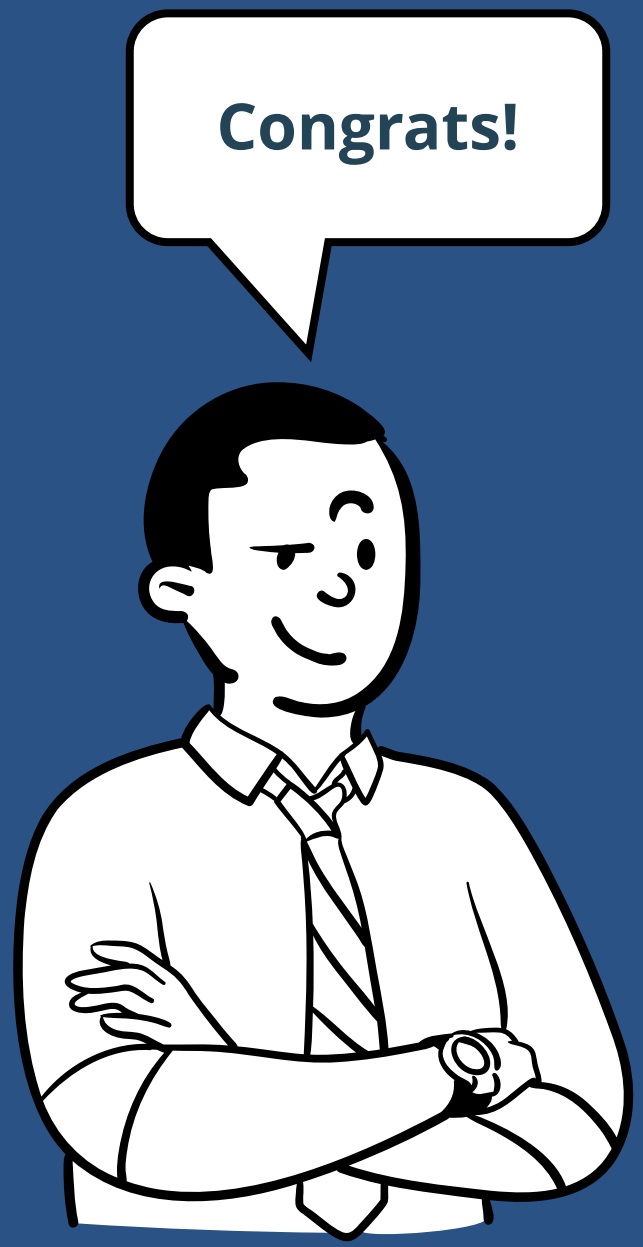
- Link to NBS School Expertise criteria.
- Address at least one of the 12 NBS societal challenge areas.
- Address at least one of the 12 GreenComp competences.



Published +2: Inspiring. Innovative. Based on real-world problems. Interdisciplinary. Hands-on. Promotes positive attitudes about STEM and NBS.

Approved +1: It's related to STEM and NBS education, and it is linked to criteria. Good description and descriptive attachment.

Rejected 0: It's not STEM and NBS related. The criteria doesn't match.



SCIENTIX
The community for science education in Europe

NBS EduWORLD

NBS SCHOOL EXPERTISE

STEM School Label

The NBS School Expertise has been achieved by

All of us!

July 1st, 2024

Project manager, NBS EduWORLD

Coordinator, Scientix STEM School Label

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Why apply for the NBS School Expertise?

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Why apply for the NBS School Expertise?

High Visibility & Recognition

showcasing your school's commitment to improving STEM education and sharing expertise.

Network Membership

in a network of STEM and NBS schools to collaborate and develop effective strategies, enhancing educational practices at your school.

Promotional Advantage

Highlight your excellence in STEM and Nature-Based Solutions by displaying the Label and Expertise insignias on all school materials.

NBS EduWORLD Feature & Best Practices

Be featured on the NBS EduWORLD website and an interactive map of NBS Expert Schools and inspire peer educators.

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Q&As

Do you have any questions?

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Thank you!

Diego Fernández, diego.fernandez@eun.org

For questions on the NBS School Expertise: stemschoollabel@eun.org

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NBS School Expertise

Join the international community of NBS-positive schools!

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