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# *BIG_GAME - Immersive and Multidisciplinary STEM Learning Game through A Cooperative Story-Driven Digital*

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# General information

- Programme: Erasmus Plus

- Action: KA220-SCH – Cooperation partnership –School sector

- Coordinator: University of Turku - Finland

- Duration: 36 months

- Start: 01/12/2021    End: 31/05/2024

**2021-1-FI01-KA220-SCH-000024098**

# Partnership

4 European countries, 8 European experts in education, STEM, e-learning, digital games, research and storytelling.

University of Turku
Joensuun lyseon peruskoulu

Tallinn University
Tartu International School
MTÜ

EU-Track

Pixel Association

I.C. Maria Montessori

FUNDATIA EUROED

# Context

- Low interest in science studies (STEM)

- Insufficient digital skills for a changing society.

- Emergency resulting from climate change.

# Project objectives

1. Promote STEM training in secondary schools (11-16 y.o. students).

2. Supporting digital transformation in secondary schools.

3. Encourage the combat against climate change.

# Promoting STEM training

Through **multidisciplinary learning** and **solving problems** related to the environment, in the form of **serious games**.

It has been prepared a **handbook** on how **to use the digital storytelling approach** in **STEM** training focused on **multidisciplinary aspects** of the subjects.

# Supporting digital transformation

- Providing an **online** and **blended learning** model, **methodology** and **tools** based on the *digital storytelling* approach to foster **learning** and **cooperation** in digital environments.

  Teachers will be supported in:

  - Develop **scenarios** to be used as **game sessions** for realization **in class** or at **a distance**.

  - **Didactic** and **technical tools** will be suggested to use **storytelling** and **evaluate** the **scenarios** developed by their students.

# Encourage the combat against climate change

- Raising awareness about **environmental issues** through immersive learning experiences.

**Students** will propose **possible solutions** to **environmental** problems that will be represented in a **learning scenario**, that will be transformed into a **game mission** in the developed digital gaming environment.

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# The learning scenario features

**1. STEM**

**2. Digital storytelling approach.**

Building **story-driven learning scenarios** on **environmental issues** (students suggest solutions to solve missions/problems regarding the environment)**.**

**Some of the learning scenarios** submitted will be **transformed** in **missions** in the **game-based learning setting**.

**All the learning scenarios** should be activities to be realized in **face to-face modality** in the **classroom**.

**Learning scenarios assessment.**

# The learning scenario setting

The scenario setting is **2030** – but **Earth** continues **to face the same climate challenges** as we are already dealing with it, but the **situation has gotten even worse**.

The **United Nations** has formed the **UN Anti-Apocalypse Force** (UNAAF), which the **student teams** play as part of, to quickly **respond to various environmental emergencies** taking place around the globe.

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# Conclusions

- A **European contest** will be held, where teams of students will suggest **solutions** to different **environmental problems** through the description of the **game missions**.

- All **scenarios developed** by the students will be stored in a "**digital bank of open resources**" in order to be **reused**, **transferred** and **modified** by **other users**.

# Thank you!

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